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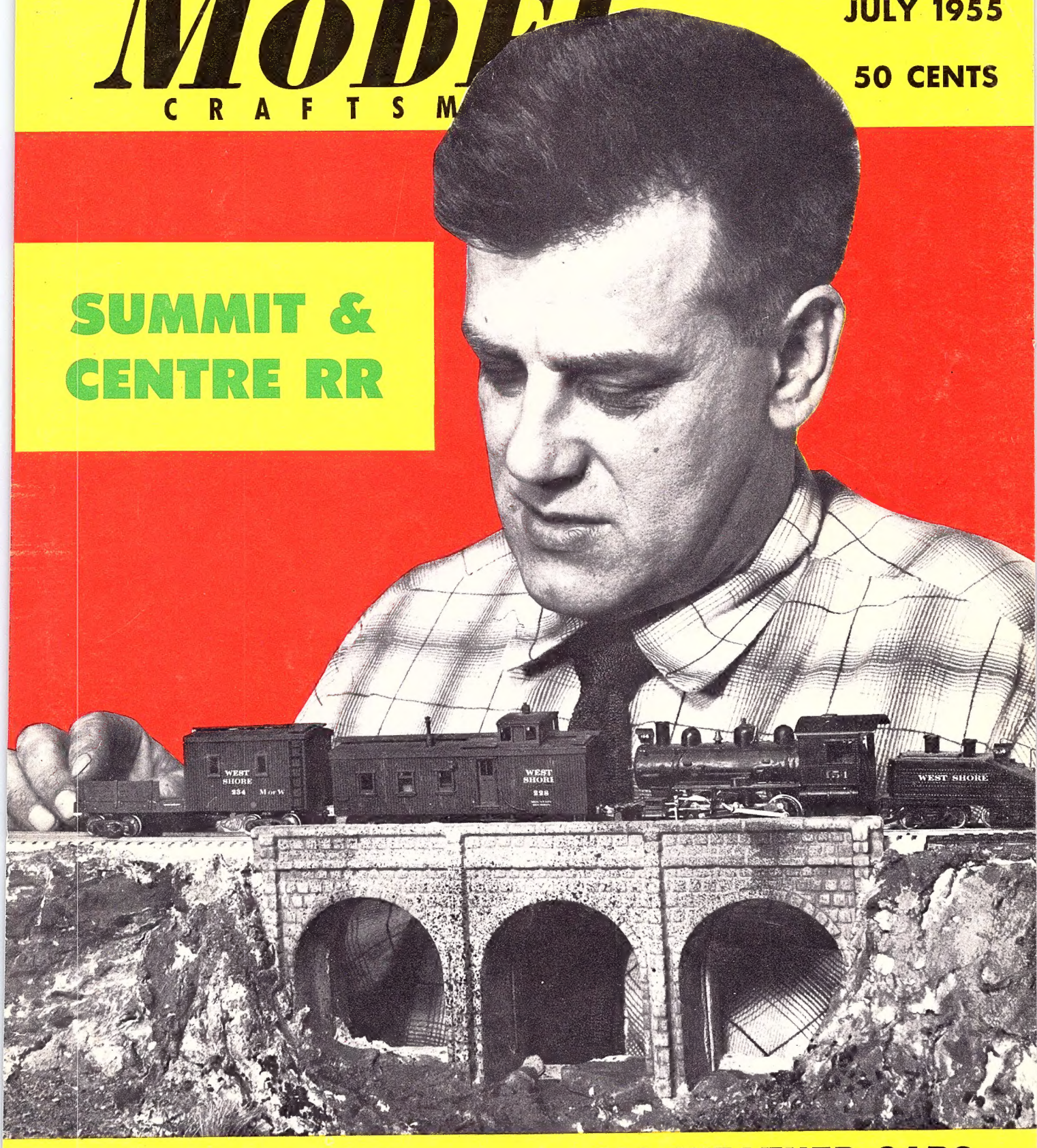

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HO MISCELLANEOUS

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AC	15.75
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O GAUGE CUSTOM BUILT

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Advertising Representatives

WEST COAST
JOSEPH MERVISH
6716 Gentry Avenue
North Hollywood, Calif.
Phone: STanley 7-7556

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2656 W. Summerdale Ave.
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THE COVER: Model railroading provides engineer George Vonderschmidt of the American Broadcasting Company with the relaxation that's so vital after a rough day of tension and strain at the WABC-TV Studios in New York. There's some more about George in the Dispatcher's Report. Carstens photo.

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A Letter From The Publisher

SOMEONE has just said to me: "It must be a real pleasure to publish RMC without any stockholders dictating your policies from a mercenary viewpoint." In thinking this over I have concluded that this is, no doubt, an advantage but it is rather frightening to think of myself as a "lone wolf" without friendly guidance from others. I rather like to think of you and the many thousands of other readers as the board of directors of RMC. All of you are my boss.

Every time you purchase a copy of RMC or send in your subscription you are tangibly expressing your confidence in me and you are actually investing your money in the progress of this magazine. This, and your many letters of comment are my guide in producing your magazine.

It was your guidance that gave me the courage to switch from the old line type of printing to the latest in lithographic reproduction, which enables us to give you many more pictures with infinitely clearer detail. Also, because you wanted it, RMC is now printed on the finest quality paper in the model magazine field.

We are paying the highest prices for the best quality of editorial material obtainable and, no other model magazine can boast of the same forceful presentation of editorial material.

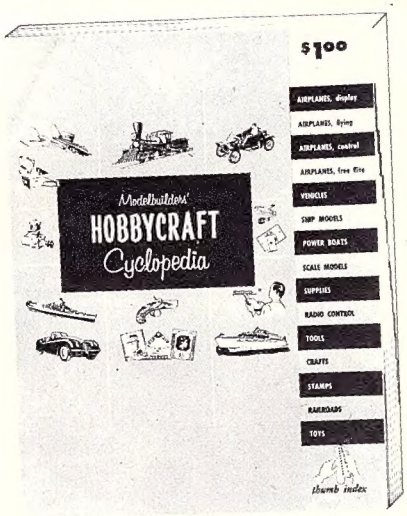
You have expressed your approval and appreciation of these improvements by placing RMC in the commanding position of being the only model railroad magazine to show a steady and substantial gain in circulation according to the Audit Bureau of Circulation. You have increased the number of copies you buy through hobby stores by more than twice; your subscriptions have more than trebled in the past year and your newsstand purchases are showing a very substantial increase.

What better guide could a publisher have than this? Could any group of stockholders or board of directors do better? I think not. I sincerely thank you and appeal to you for your continued guidance.

Sincerely yours,

Next Month –

Last month we promised you that NYO&W 2-10-2 and it'll definitely be presented in the August issue. It's a mammoth engine that's right at home in mountain country behind long coal drags . . . Timetables are covered in a very comprehensive and delightful manner by Ken Brennan and Norman Eagles . . . Trolley man Dick Keegan who sings the blues in the Safety Valve this month sent us a manuscript some time back on how he built his trolley line that would fill the New York phone book. We've boiled this down into one of the most fascinating articles of its type that we can recall seeing and we want to warn you steam fans that if you want to keep on hating traction, you'd better skip those pages! . . . Of course, there'll be lots more in the way of features, Test Track reviews, Dispatcher, and all your other pet departments. Better reserve your August copy now! Ed.



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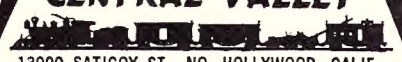

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F. Glenn Smith
Greenville, S. C.

● *Penn Line offers a metal plate which may be screwed to your automobile license plate, and which tells the world that model railroading is the world's greatest hobby. Decals, for automobile, luggage, or what have you, having similar phrasing, have also been made available by the Eastern Model Railroad Manufacturers Association. Both the plate and the decals can be obtained or ordered by your hobby shop dealer or from certain mail order houses advertising in this magazine. Ed.*

The Sage From Baltimore

I was interested in seeing Bill Schopp's article on the Winans Camel in the April issue, but would like to clarify his statement to the effect that the Camel locomotive No. 217, now in the B&O Museum, is a Hayes Camel. This is incorrect. It is a Davis Camel, built in 1873.

Lawrence W. Sagle
Pub. Rel. Dept., B&ORR
Baltimore, Md.

Test Track Comments

In your Test Track report on the ICC kits being revived by Dick Wagner (RMC April 1955), you suggest that the builder test his paint on the inside of the car to determine whether it will react adversely with the plastic sides and ends. That will not be necessary if the modeler uses Floquil paint.

Before building the first of my five ICC trolleys, I investigated the paint problem pretty thoroughly. I decided on Floquil because experience with it indicated it would be least likely to attack the plastic and I wanted to standardize on colors for the remainder of my trolley fleet, which included models built of wood, nylon, and various metals. I knew Floquil worked well on wood or metal, and a subsequent test on Mantua's old timer proved it safe on that material, too.

I brush painted one entire side of an ICC kit as a test. The paint covered nicely (although two coats would be in order), did not obscure the "wood" planking, and dried without a gloss. There were no ill effects on the plastic.

Especially to be avoided in painting the ICC kits are the types of paint designed for use on plastic automobile kits. This type of paint has far too much sheen for a trolley model. Also, according to one manufacturer to whom I wrote for information, there appears to be no satisfactory way to kill the glass.

For asembling the ICC kits, I would recommend Walthers Goo. It holds well without distorting the plastic, and it has the welcome advantage of setting slowly enough to permit the sides and ends to be aligned accurately.

Robert M. Buckley
Buffalo 23, N. Y.

Thanks for the information, Bob. The plastic used in the ICC kits is not the same as is being used by many other manufacturers and we'd still recommend testing the inside of any kit with your pet paint before going ahead. In applying some Floquil to a Varney plastic Ford automobile, we did encounter a wrinkled finish, which the use of a special plastic paint such at 410M might avoid. As far as preferance for shiny or dull trolley finish is concerned, much will probably depend on the prototypes with which the modeler is familiar. Certainly many trolleys were dull and drab. Other companies kept their equipment immaculate and as shiny as a 1955 Cadillac. Ed.

Keeganville Traction Daze

From the tone of the letters trying the Swapper's Column, you'd think it was about the best medium in the hobby. Come to think of it, I had an ad in the Column a few month's back and was real pleased with the response.

Since variety is said to be the spice of life, I'm trying to spice up the railroading, both traction and the other kind—the kind which don't require no wire for operation, and when there's a cornfield meet, ain't a bitta trouble to rerail cars. In traction, now, that just ain't the case—buleeve me, special on them curves close to a hillside where the track sorta sneaks along the side of a hill, the line poles of course is on the outside where they should be, backbones and all and when a wheel goes off there just has to be a little cussin done to get it back on. Ain't nothing to compare with it tho, them little sparks jumping off the trolley wire when the dang cars do run, is really a sight to behold. Most trolleys run as smooth as spit on a hot griddle and the wire stays nice and clean, about like freight cars running on oily track; but it's all in the game.

Just when everything begins to run real smooth and a car can be started at a station stop without having to be shoved, just when all the operation is beginning to be what might be called enjoyable, then one of the danged ears decides that being soldered to the wire just ain't what it wants, course it's always an ear on a curve or next to a wire pan that lets go, and it lets go just as the local is meeting the express at Punkin Center Jct., then the only thing left on the wire is the pantographs of the express which is still going and rams into the local which ain't getting no juice a'tall. Then, when a guy's bound and determined to get the best contact possible and installs jumpers between two cars, shoes to ride on the rails and hooks up both pans to get good wire contact, its then that a wire pan decides to tilt just a teensy bit and hang the lead pan up, natcherly since we got all that real good contact and have bolted the pans to the roof. Of course the only thing is that this rips the pan just literally all to blazes, that's all.

Well, back to work to make some new pans. Got plenty of places for them.

Dick Keegan
Norton, Kansas

Shucks, friend Richard, things just aren't ever that bad. They get's worse. Like the time the editor's pride and joy berkshire suddenly started jumping up and down, scattering monkey motion parts all over the 3.5mm landscape. Ed.

Along The Line—

glyn Lewis

Our TT gauger, Glyn Lewis, though born but a stone's throw from where George Stephenson ran the first famous "Rocket" near Newcastle-on-Tyne, England, didn't join the ranks of model rails until some 25 years later. These 25 years saw a boyhood in the Garden State filled with thoughts of airplanes. He built prize winning model planes, worked on a newspaper, did oil paintings for some of the airplane magazines. During World War II he served in the Royal Canadian Air Force. Came home, got into advertising art, and married his wife, Betty, who is passively interested in model railroading but is quite a bug on color photography.

Discovered Swedish HH gauge back in '47 but couldn't get parts, and then decided on TT gauge, then in its infancy. He now has a 4' x 10' layout almost completely scenicked. His pet interests are scenery and building structures. Says he owes his hobby to two women: his mother, who always encouraged any model building hobby, and his wife who is never too busy to "come and look" and criticize constructively any new TT project. Glyn has been writing for RMC since 1949 and has seen the mail grow from two letters per month to hundreds. Some of the TT equipment now manufactured was designed by Glyn.

Lives in New York City, finds it hard to find time for a full day's work, his photo hobby, model railroading, his love for the theater, writing the column, and keeping in touch with all of the TT manufacturers, and answering the mail from readers. "Heck," says Glyn, "Who's got time for TV?" Chances are, tho, that you can catch him up in those wee small hours catching the Late Late Show.

Super Cutouts

May I suggest that you even attempt big projects wherein the cutouts may cover two or even three issues. I also like the full color covers which are not only striking but give beginners like myself ideas to put into our own layouts. I think you should repeat basic ideas and principles so that the beginners will know what is what.

Is A Toy A Model?

In the April column, Robert F. Smith defined tinplate as a mere child's toy. I'm a tinplater and I don't agree with him. The famous Roadside America display uses a large number of these so-called toys. There are also a very large number of tinplate layouts in the U.S. operated by adults. I don't think a grown man would spend a lot of money to play with toys. The tinplate trains of today are usually scale size, or pretty close to it. When put side by side, it would be hard to tell tinplate from scale. Today's tinplate is definitely not a toy.

Charles K. Semenuk
Cleveland, Ohio

I agree that a Lionel locomotive is a toy, and supposedly, a Lobaugh locomotive is not a toy. But then what do men do once or twice a week? Do they not "toy": play, amuse oneself (Webster's International Dictionary)? Now then, what do people usually toy with? Toys! The prosecution rests.

Stephen Hughes
Hicksville, N. Y.

A Lionel locomotive is not necessarily meant for a child and it is not necesarily a toy. It all depends on who is using it and how it is being used.

Douglas Brink
Orange, California

Blowers on the F-7

In regards to David Henderson's letter in the May RMC Safety Valve as to whether an F-7 has four blowers or five; in either case, it is still an F-7. The fifth blower is for the more or less optional "dynamic brake." Some roads use 'em, some don't.

If used, the traction motors are "converted" in effect into generators when needed to furnish braking action. The current generated is converted into heat and this is dissipated via the fifth blower.

John F. Heer
Ames, Iowa

Club Notices

PLAINVIEW, L. I., N. Y.—Stephen Reden, aged 13, avid HOer, would like to join club in Hicksville-Plainview area, or possibly start one. 16 cynthia Lane.

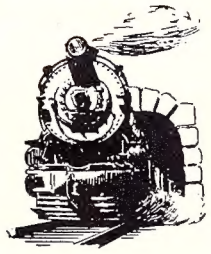
New Literature Received

HOW TO RUN A LATHE, Vol. 1, Edition 53. The latest revision of this popular manual gives a complete rundown for beginner or apprentice on the most accepted fundamentals of the operation of modern screw cutting engine lathes. Printed on slick stock, with hundreds of drawings, diagrams, and photographs, the 128 page volume is recommended for any model railroad fan who owns or is contemplating the purchase of a lathe. Published by South Bend Lathe Works, South Bend 22, Ind. Price 50c.

HO-TT CATALOG. There are 64 pages in the new America's Hobby Center catalog, printed by letterpress in two colors. Size 8¾" x 5⅝". This latest catalog is exclusively for HO and TT gauge and lists over 5000 items. The catalog price is 50c but there is a $1.00 refund coupon included good on the first order. 156C West 25th St., New York 1, N. Y.

CHAMPION DECALS—CATALOG 55A—HO and O. 8½" x 11" 24 pgs. Complete catalog of entire Champion decal line for HO and O, listing railroad lettering for locomotives, freight and passenger cars, private owner cars of various types, circus decals, and other special decals. Hints given for proper application of decals. Price 20c, Champion Decal Co.

KEMTRON CATALOG No. 1—TT-HO-OO-S-O-HOn3. 8½" x 11" 48 pgs. A symphony of model railroading gems. Hundreds of quality parts are offered, many in lost wax brass, others as detailed photoengravings. OO fans will be thrilled at the first three cars of the former Scale Craft line now offered by Kemtron (twin hopper, tank, caboose). Additional OO items are coming. O gaugers are offered the Alco road switcher, GP-7, C P Huntington, Shay parts (engine coming too), On3 D&RGW C-16 parts only, OO GP-7, HOers, of course, get the bulk of the offerings with many conversion parts, fittings, locomotives and cars. TT gauge also offers several locomotives and many parts. The catalog also lists an S gauge tender and a number of imported HO Japanese locomotives and cars including some by Tenshodo. Price $1.00, Kemtron Products Co., 750 Fulton Street, Fresno, California.



DISPATCHERS' REPORT

MANY readers have been writing in words of praise about our new heavy, slick paper. This new paper plus the modern, high speed presses on which Railroad Model Craftsman is printed, is producing photographic reproduction never before approached by any publication in the model railroad field. And don't take our word for it, compare the reproduction for yourself with any other magazine; especially the clarity, richness, and sharpness of the photos. It's expensive but we feel that it's worth it to bring you a better magazine.

Model Tramway System coming out with a Peter Witt car in HO . . . And from Model Builder's Supply Co., a new all wood NADX egg reefer in HO . . . Lobaugh ready soon with an O gauge Climax locomotive which is terrific for any pike having steep grades and short trains. The Climax looks for all the world like an egg beater in action.

What about the new X-2F couplers? Now made in plastic by Rail Line, and in metal by Kemtron and Roundhouse, they are the result of several years research by an NMRA committee headed by Paul Mallory. Appearance-wise, the coupler resembles somewhat the old American Flyer HO coupler but is smaller. It will not couple with other couplers. The design is simple, appears to work well, and is available in three different designs, not all of which adhere fully to NMRA standards. Whether the X-2F is the panacea being sought by all HOers only exhaustive testing on home layouts will tell. Many Kadee and Mantua users, along with AAR Janney coupler fans, will sit back and wait. At least several big name manufacturers have also adopted the same attitude. American Flyer meanwhile has junked its old design and will feature the X-2F in its 1955 HO line. And at least one other manufacturer is said to be tooling up on the X-2F.

One of the things in model railroading which the old DS seems to do the best of all, is to knock over boxes of spikes onto the floor while laying track. Truly, it's a pretty sight to see 500 or a 1000 of the little things staring up at you through the open framework, scattered all over the floor. It's then that you tie a magnet, such as offered by the Park Magnet people, to a piece of string and let it swing back and forth a bit. Durned if it won't pick up all of your spikes and maybe a few other small missing parts as well. Wonder if anybody will ever invent a magnet that'll work with brass. Then we can find tiny screws, rail joiners, and all kinds of similar items in a hurry, too.

One of the staff lives in West Englewood, N. J.; frequents the barbershop which is located right by the spanking new railroad station. Usually gets his hair cut when density of traffic is at its heaviest; claims it's a real good parade. . . .

It takes all kinds. The Swapper's Column, which had to be extended to two full pages in May and June to clean up the backlog, is as you know a free service. We try our best to keep it on a first come, first served basis. Occasionally somebody along the line slips up with the result that somebody will get in earlier than he should. We felt pretty bad about it when one well known New York State collector laced into us on this matter, until we discovered that he had sent in four ads all within a very short time, which in turn meant that three other ads had to wait because of his selfishness.

NYSME officers for the new year sees all of the old officers reelected. Doc Ackley heads the hundred man organization, with smiling Bruce Coughlin as Veep, Jerry Seyman as Treasurer, John Reschke as Secretary, and Herb Ruddock as the Recording Secretary . . . You should see the snappy new O gauge trolley line being built by the New York Society . . . And speaking of O gauge trolley lines, in addition to the NYSME line at Hoboken, New Jersey; there's another line at Westfield operated by the Central Jersey Model Railroad Association which is a honey and it's being extended to twice its former length . . . And, watch for some very nice imported O gauge trolleys, including an open car that is out of this world.

The NMRA released another set of data sheets to its members in May, the first set for 1955. Included in the set is the last of a series on architectural elements, listing data on arches, platforms, flagpoles, etc. Other sheets cover outdoor sports areas (baseball diamonds, football field, etc.), worm gears and locomotive speed, worm gear sets for model railroad use, safety appliances, and resistors. Much of this material is stuff that might not interest you at the moment but which could be invaluable that one day in the future. NMRA members get them as part of their membership benefits. You can't get 'em any other way.

Here's the very latest data on the new Gilbert HO trains which will be available this fall. Both the New York Central J-3 and the Pennsylvania B-6 0-6-0 have smoke and choo choo sound. The new diesel is an Electro-Motive F-3 with 8 wheel drive and headlight; will be ready to run and painted in Lackawanna colors. A powered B unit is also available. NMRA X-2F couplers are standard throughout, although interestingly enough, an uncoupling ramp is not listed in their new catalog (you can make one yourself in a jiffy). Snap Track is also in the line in both 15" and 18" radii. All cars are finished in realistic colors and lettering, quite a change from the early pre-war Gilbert HO cars which had rather brilliant enamel finishes. The No. 650 power pack has a throttle type speed controller and a self setting thermal circuit breaker, with 1½ amps output. Accessories this year include a rerailer, passenger and way station, girder bridge, bumper, switches, and 90° crossing. Additional information was given in the May and June issues under Toy Fair previews.

Ho, Ho, laughs genial Dick Abbott, who then inquires, "How did I get to be an HOer?" Seems your old DS made such a statement in the April issue and of course everybody knows that Dick is really an S gauger. Says Dick; letters, phone calls, and all kinds of comments resulted from folks wanting to know when he'd changed gauges. So, let it be known Dick Abbott works in S gauge. Ho Ho!

The new mail address of Sherman Dance, the Gandy Dancer, is Box 92, West Englewood, New Jersey . . . The foolproof operation and neat, although admittedly somewhat oversized, appearance of both Lionel and Kusan-Auburn knuckle couplers for O gauge tinplate should make them quite desirable items for scale O gauge operation. Gilbert's S gauge knuckle coupler is even closer to scale O gauge size. Most O gaugers, however, would rather give up this feature for top notch appearance and find the Monach AAR automatic coupler an excellent compromise operations-wise.

Beginning with the August issue, RMC will start printing on a brand new half million dollar Webb offset press, giving even finer reproduction than we're getting now. . . .

And still the new kits continue to pour in. Richard A. Lee has a new passenger train shed in both HO and O gauge. Both kits contain parts for two complete, separate units that may be combined into one extra long unit if desired. The HO sheds scale out to 72' in length, the O gauge units to 60' scale length. The fellers down in the Test Track department are now building up one of these units and we hope to be able to report on it for you soon.

Here comes a whole new series of quality HO gauge car kits from Ed-Lee, manufactured by Model Builder's Supply Company, in Duarte, California. The first release is a North American Despatch refrigerator car in bright yellow with prelettered wooden sides, nicely scribed. To come, and we expect pretty promptly, are a fire engine red Swift reefer, and some express and merchandise cars in Pullman Green. The Model Builder's Supply kits are almost all wood, except for hardware parts and they go together like a charm. They're worth a look-see at your hobby shop.

George Vonderschmidt is the man on the cover this month and he is watching as the first trainload of officials takes a run over the newly completed mountain division on the New Jersey, West Shore & Albany RR, built by one of our staff. George is with the American Broadcasting Company as an engineer and after a rough day at the studio with such people as Eva Gabor, Dagmar, and others, he finds relaxation in model railroading. George gets his biggest bang out of collecting and at this writing is the proud owner of five Lionel GG-1 locomotives, four Pennsy 0-6-0 switchers, and an even dozen Lionel hudsons of which six are model 700EW. We think he finds those hudsons on trees.

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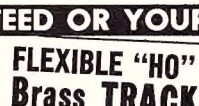

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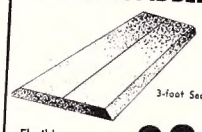

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Cast Side Rods

▶ My pride and joy, a Varney mikado keeps breaking its side rods every so often. While I can replace them, it does require work, and I find I am unable to get more at the present time. Will you suggest a permanent cure? Will you also suggest where I can get a Varney consolidation boiler casting to change a Penn-Line H-9 over to Reading prototype? My dealer doesn't have any.—August Zinffer

ANSWER: Varney catalogs one-piece stamped side-rods for the Mikado as well as other engines which eliminate breakage. However it is possible that worn bearings in the frame (which would have to be bushed) or loose driver screws (replace) might be contributing to your trouble. Even if your dealer doesn't have a consolidation boiler, which is no longer cataloged, ask your dealer to order you one from his wholesaler and if not they are available from a different wholesaler or directly from Varney. They are around, but it takes a little searching to obtain one.

Spoked Pilot Wheels

▶ Some months back I saw an article on fixing up a Roundhouse Atlantic with spoked pilot wheels which said they were a Kemtron product. Have not seen them advertised at this writing and wonder if they will be soon?—J. L. Winser

ANSWER: Your dealer or you should be able to get them from Kemtron, a firm which has such a vast variety of specialty products that they just never get around to advertising all of them. The engine in question, we note from the write-up, used the "raw" parts before they were worked on by the factory, but we feel sure that they are obtainable by now. The predicted price at that time was $1.25 per pair mounted.

MDC Santa Fe Atlantic

▶ I am writing to inquire who is right in re the Roundhouse Atlantic type of Santa Fe prototype. I recently bought a paper bound book on railroads and saw in it a picture of a very similar Santa Fe Atlantic, but it looks quite a bit longer with space seemingly for an extra wheel between the cylinders and the front driver. Were there two series, or did Roundhouse make a boo-boo?—Andy Bligh

ANSWER: The engines you speak of were originally built as three cylinder locomotives, with the third cylinder located between the other two and driving a crank in the front driving axle. This extra cylinder was visible from the front. The front drivers *were* located back farther as were the other wheels. The main-rod led from the cross-head directly to the crank-pin on the first pair of drivers, much in the manner of a regular 4-4-0. The result was one of the ugliest engines ever to turn a wheel. However the whole series was subsequently rebuilt with only two cylinders and a shorter boiler so that the Roundhouse kit is a model of one of the engines as rebuilt and as such is accurate. It might prove an interesting project to revise one of the kits to the original appearance of the engines.

NYC Feedwater Heaters

▶ What kind of a feedwater heater did the famous NYC Hudson type engines have? Some of the photos I have seen vary quite a bit in detail.—T. Monford Jackson

ANSWER: Some had Elesco heaters as indicated by the ends of the "tank" sticking out each side of the smokebox top just ahead of the stack. Others had inside mounted Coffin feedwater heaters (the kind occasionally stuck out front like a hood) which can be told by the absence of the Elesco stumps and the presence on the right side just behind the rear driver and low down of the Coffin feedwater pump sitting there on a little platform.

Small Tubing

▶ Where can one obtain small sizes of brass tubing for use as spacers, and so on?—Gary McConnel, Bethlehem, Pa.

ANSWER: A good many hobby shops carry this material in telescoping sizes from 1/32" to 3/8". If your dealer does not have it, ask him to find out from one of his wholesalers about it. In some areas it is known as Lewis brass tubing. It is also available in aluminum.

Warped Die Castings

▶ The writer is endeavoring to build up a small collection of old toy trains, but has met up with this problem, namely that many of these relics, if die-cast, have warped or broken bodies, while many more have warped wheels that simply will not run. Would like to inquire whether there is anything that can be done now to prevent further deterioration, to correct warpage if possible, or to prevent the few apparently good castings I have from breaking up?—John Kent, Sr., Denver, Colo.

ANSWER: Aside from breakage caused by blows, the warpage and crumbling is caused by impurities in the original die casting alloy used. There is nothing that can be done for castings that are already crumbled or warped except replace them—often cannibalizing another engine with a poor motor. However new driving wheels for Lionel Standard gauge may be obtained from Model Engineering Works, Box 506, Arcadia, Calif., while wheels for O gauge engines can usually be gotten from Lionel Service stations. One toy train collector is experimenting wtih various sprays such as Krylon to try to preserve castings from further damage, but of course the results wil not be known for years.

HOn3 Couplers

▶ What kind of couplers are used most in HOn3? What kind of ties and roadbed?—Richard Lambina

ANSWER: HP automatics meant for TT gauge are often used in HOn3. Also regular HO Kadee automatics with shortened pin, or plain dummies may be used. Some fellows prefer to cut ties from strip-wood, but it is also possible to use regular fibre tie-strip with one "rail" cut off. The best rail to use is so-called "code No. 70" available from Kemtron and from Umpco, but regular code No. 100 HO rail will of course work.

Using Cork Roadbed

▶ Can the Atlas flexible cork roadbed be used with regular Atlas or other flexible track and spikes only? The cork will be nailed to the plywood base.—J. LeBlanc

ANSWER: Yes, but spike it down every inch or so and if possible use O gauge spikes which are longer. The preferred way is to cement the track to the cork with only a few spikes or pins to hold it till it sets. It is also a good idea to cement the cork roadbed to your base, again using pins or spikes just to keep it located until it dries.

Powering a 4-4-0

▶ I plan to build an old time 4-4-0 from scratch. I have been thinking of using a tender drive but have noted that there won't be much space left in the engine for weight. I would like mine to be able to pull plenty, but can't figure out how to do it. Can you suggest anything?—Les Dvorzsak, Brooklyn, N. Y.

ANSWER: The old 4-4-0 engines were not noted for their pulling power. However, be sure that no weight is on the pilot truck, so that all the weight in the engine is used for traction. One idea, which we have never seen tried, would be to mount the motor in the engine, facing backwards, and driving the tender through a flexible shaft with geared trucks, similar to those shown in the steeple cab diesel (RMC July 1954). In that way, all eight wheels of the tender could be powered to push the engine and the tender itself could be crammed solid with lead.

Snap-Track Plans

▶ I have been looking through the Snap-Track booklet by Atlas and have tried some of the plans using regular scale track. However something must be wrong and I think that gaps are required in the rails somewhere. A switch thrown wrong will not stop a train from plowing thru it as I understand was the way in HO. Please explain.—Charles Goodenough, Cleveland, O.

ANSWER: The plans in the Snap-Track booklet are shown for Snap-Track only and some changes are necessary if you change to scale track. Using Snap-rack no gaps are normally required unless you wish to run more than one train at once *under separate control* (as on double track), have reverse loops or wyes, or wish to insulate a siding for some reason such as stopping a train. You see the Snap-Switches are designed with an insulated frog so that the tracks beyond the switch are NOT dead when the switch is thrown the wrong way, as is the case with scale type switches. To adapt one of the given Snap-Track layouts to scale track & switches would require some gaps and sometimes a different location for the terminal sections (or feeders), and this would be different for each one. Additional layouts for Snap-Track may be found in the Winter 1954-5 issue of TOY TRAINS magazine

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OFF THE TEST TRACK IN MODEL RAILROADING

Model Railroad Insurance

THE growing monetary value of many model railroads, the increasing display of model railroad equipment at conventions and exhibitions, and numerous other conditions, have long pointed up the need for a special model railroad Rolling Stock and Equipment Floater Insurance Policy. Such a policy has now been made available to model railroaders and we feel that it is worthy of consideration by any model rail who values his equipment, and/or collection.

Our first thought upon receiving the specimen policy in the mail was the reliability of the underwriter, the Fireman's Fund Insurance Company. A check with a leading New York insurance firm vouched for the Fireman's Company, and further check revealed it as one of two insurance companies listed among the top fifty industrials on the New York Stock Exchange. They are also the leading company nationwide in Inland Marine forms of insurance, and are admitted to do business in every state and Canada.

The policy is of the "specified Peril" type, rather than "all-risk," which greatly simplifies the policy. Specifically, the policy provides coverage on the following: fire and/or lightning, windstorm, hail, internal explosion (such as oil burner), earthquake, flood, vandalism, burglary or hold-up, and mysterious disappearance (subject to $10 deduction on every claim).

The following are excluded from the provisions of this policy: loss or damage caused by wear and tear or gradual deterioration or damage caused while the insured is being worked upon, collision or derailment and/or breakage unless caused by perils insured against, infidelity of the insured or any person to whom the property may be entrusted, and the perils of war. Also loss or damage resulting from overloading of cars, and loss or damage resulting from switching, humping, or coupling of cars (what kind of couplers do you use?). Loss or damage which results as the result of the neglect of the insured to use reasonable means to save or preserve the property is also excluded.

Equipment covered by the policy is fully protected wherever it may be in the United States and Canada, including the rights of way of other railroads. The policy is also extended to include coverage while the equipment is in the custody of the mails or any common carrier.

Base rates for the policy are $2 per $100 of insurance up to $1000. Clubs and larger layouts benefit from a reduction on the next $1500 worth of insurance at a rate of only $1 per $100. The rate over $2500 is only $0.50 per $100. It's interesting to note that this policy was based on the form used and approved by the Railroad Insurance Association of New York.

This policy provides coverage not previously obtainable by many individuals and clubs. For example, some clubs have been unable to obtain burglary insurance. Burglary and fire insurance would not provide many of the special features of this policy.

Cash value of models in the policy shall be considered as the kit price, or replacement cost with no allowance for time or labor involved in construction. This does not apply to commercially built models.

The TEST TRACK heartily recommends this policy to any model railroader who values and prides himself in his layout or equipment. It provides a valuable protection not heretofore offered the model railroad hobbyist.

Further details may be obtained from Bruce R. Miller & Associates, 5478 Wilshire Rd., Los Angeles 36, Calif.

HO Model Vehicles

Few model railroads seem to have enough model vehicles on them for realism. Some modelers ignore them completely, others seem content with two or three. Possibly this stems back to the earlier days of HO when the only autos and trucks available were five and ten cent store toys, horribly out of scale.

Railmaster now offers an extensive line of trucks, automobiles, and other vehicles. These are cast in hydrocal, a very tough durable plaster. Railmaster miniature trucks and autos come ready to drop in place on the layout. Tires are black rubber, mounted on metal axles molded in place. Each vehicle is painted in one or more colors, leaving only the windows a bare natural white. Headlights and marker lights are colored silver. Each of the samples we inspected had remarkable detail. We painted the windows in, using silver, pale blue, and black. All colors were effective and once the last bare plaster was painted, it was difficult to believe that these units were cast in plaster.

No decals or lettering are included on these units, this being left up to the purchaser. In the lineup are automobiles, trailer trucks using both White and Autocar tractors, caterpillar tractor, small trucks, etc. A complete listing of the available models were given in the June 1955 Accessory Directory.

Prices of these models vary, are largely from 50c to 75c prepainted. Manufactured by Railmaster Products Co., Lancaster, Pa.

Magni-Focuser

The Magni-Focuser is an eye aid in the shape of a binocular loop. It has two lenses, finely ground of optical glass. In each lens is ground a prism which assists the eyes in converging at a given focal distance. There are a number of different models of the Magni-Focuser available. Model 5,

which we tested, gives a 2¼ times magnification at a distance of about 9 inches. Other models offer different magnifications at varying distances. For close work on models, Model 5 seems ideally suited.

The unit is worn on the head and has an adjustable strap which fits everybody. The Magni-Focuser should be worn in a horizontal position, with the lower edge of the instrument about level with the eyes. In this way you have natural or magnified vision by merely lowering or raising the head.

Magni-Focuser is a product of Edroy Products Co., 480 Lexington Avenue, New York 17, N. Y. Price of Model No. 5, $10.50.

Kwik-Stik Glue

A new glue product is offered to model builders by K & B Products. A white glue, Kwik-Stik is suitable for wood, paper, bristol board, fabric, and most other materials for which glue is normally used. In joining wood parts, it is best to use a generous coat. Excess glue can be wiped off with a damp cloth, thus avoiding the shiny paint-resistant spots often left by acetate cements. Where a very strong bond is needed, the manufacturer recommends applying Kwik-Stik to both surfaces, allowing the glue to become slightly tacky before joining. Kwik-Stik dries rapidly when applied to porous materials, but takes somewhat longer with wood.

Kwik-Stik is packaged in a large 8 oz. plastic bottle, to which is attached a handy pouring spout, ideal for home craftsman purposes. Larger amounts may be poured by unscrewing the spout. When empty, the bottle may be refilled at even less cost by buying additional Kwik-Stik glue in quart or larger sizes. Kwik-Stik is uneffected by grease, oil, gas, or most solvents. Kwik-Stik is especially recommended for joining large pieces of any material and it, has the extra advantage of having many home and workshop uses. Price per 8 ounce flexible plastic bottle, $1.00. Mfd. by K & B Products Co., Washingtonville, New York.

Station Shed Support, HO

Suydam's new cast metal station shed support has long been needed. A tough, one piece zamac alloy casting, the supporting column is wye shaped, and of typical modern period steel and concrete railroad design. The small amount of flash remaining on the casting is easily filed away.

Included with each package of six supports are complete instructions on constructing train sheds, as well as data on terminals. Catalog No. S120, price six for $1.50, at all hobby shops. Mfd. by E. Suydam & Co., Box 55, Durate, Calif.

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How To Build a Model Railroad*

* Based on the original book by the late Harold V. Loose, former managing editor of *Model Craftsman*, and completely revised and edited by Harold H. Carstens.

passenger cars

Many fans have been attracted to scale model railroading by the long, sleek appearance of full length eighty foot passenger cars, while others prefer short open enders. They come in all sizes, these glamour girls of the rails.

CHAPTER VIII

WHILE fancy paint schemes and hotshot scheduling have done much to add some measure of glitter to freight operations, the average person, and this includes many model railroaders, still consider the freight train as a rather drab personality doing its job in an uncomplaining manner. It is the passenger train that brings the real glory and romance to railroading. Most of us come in contact with passenger trains, at least occasionally. Perhaps it is in a smoky commuter train with its familiar faces, a day local with a few sleepy passengers, or the sleek streamliner with dome cars, diner, and other luxury equipment. You can take your choice: some railroads operate them all, others may operate only a local, or perhaps one or two streamliners.

Types of Cars

The day coach is the most familiar railroad passenger car of all. Ranging from sixty to eighty feet in length, they are found on almost all types of trains. Some coaches have a baggage compartment at one end and are called combination coach and baggage cars, or "combines" for short. Combines frequently are used as smoking cars.

On longer runs, many people prefer to pay extra fare and ride in the luxury of a Pullman car. A Pullman car is normally thought of as a sleeping car but this isn't always the case. Pullman sleepers come in many types. The old upper and lower type car is rapidly giving way to bedroom and roomette type cars.

There are also dining cars, snack cars, and grill cars; all of which serve food at varying prices and in varying degrees of comfort.

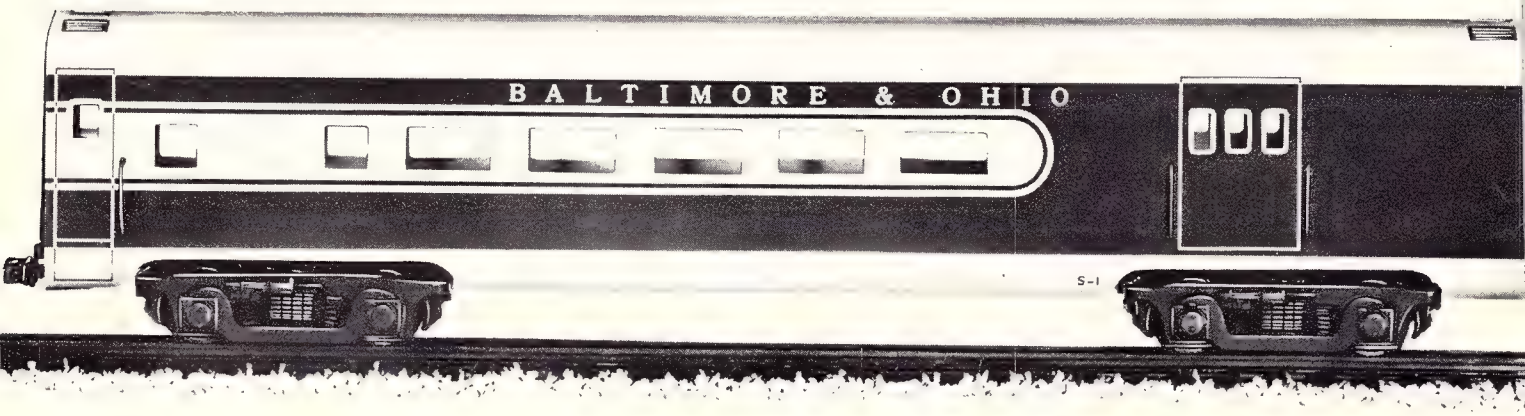
Observation and solarium cars are found at the rear of the train, and while they may contain a number of compartments for sleeping, they usually have a lounge at the rear, sometimes with a grill or bar. Not all trains have observation cars; in fact, they are usually found only on the crack limiteds and expresses. The old open platform type observation car has almost disappeared from the railroad scene, having been replaced by closed end cars having large picture windows all around the end.

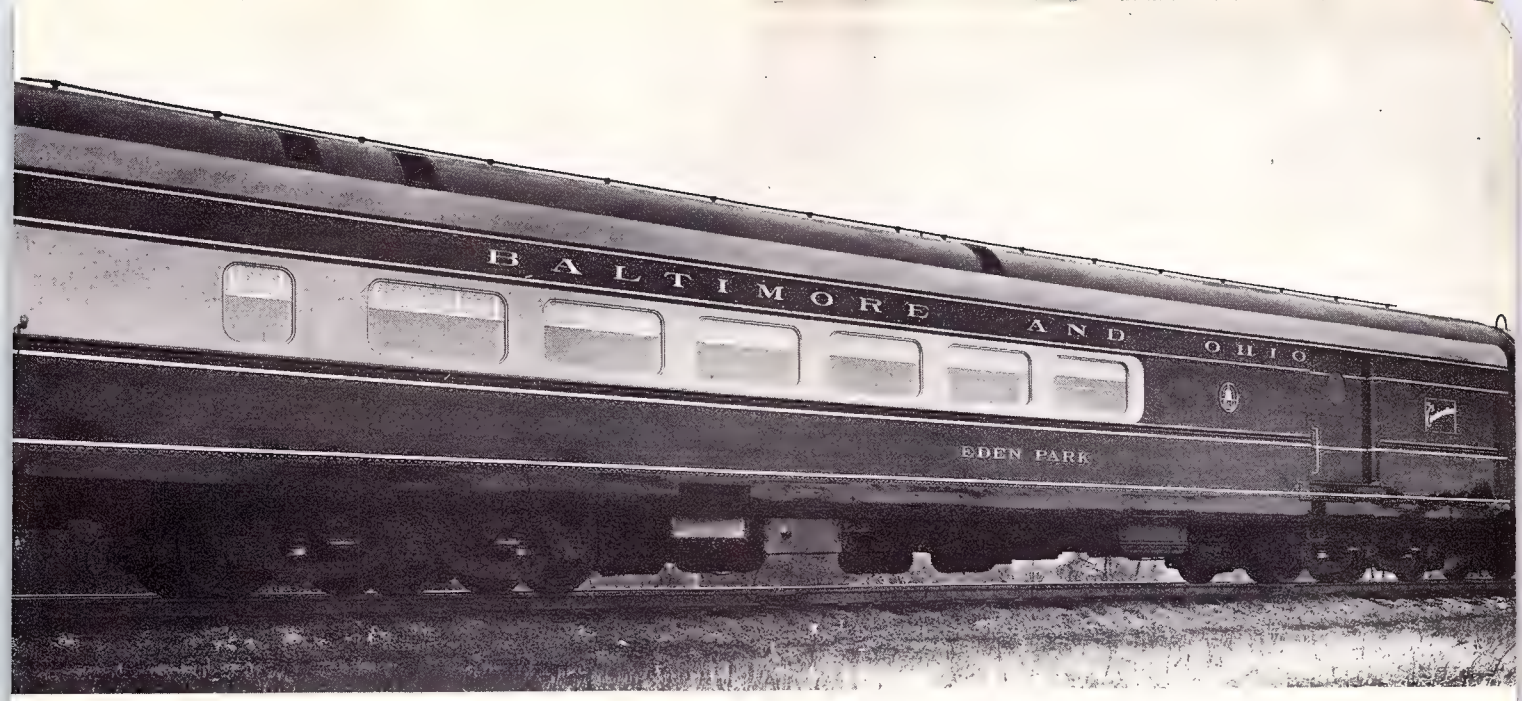
A recent development is the vista-dome car, featuring an upstairs seating gallery, not unlike a caboose cupola but much larger. The view from such cars is excellent but because they raise the height of the car, they are rarely found on eastern railroads due to clearance limitations.

Head end cars do not carry passengers but because they run on passenger trains, we include them here. So called because they are normally (but not always) found at the front end of passenger trains, they include such various type cars as baggage, mail, express refrigerator, horse, and dormitory cars. Oftentimes, special high speed box cars are also found at the front end of passenger trains.

Hundreds of different passenger cars are available from a variety of manufacturers, ranging from ready to run cars, to craftsman type construction kits which may take up to a week to assemble.

You can have short passenger cars and still be 100% to scale if you pick old timers such as this extra short combine used by the Sierra Railroad in California. This car is shorter than many freight cars.





The tremendous length of some passenger cars often makes it necessary for the manufacturer to compromise with scale. The model at lower left has been shortened considerably and otherwise modified to permit the manufacturer to make the same car available painted and lettered for a number of other railroads as well. The shorter length permits cars to take sharper curves than would 80 foot cars.

Types of Trains

There are all types of passenger trains and you should be familiar with them all, even though you may not care to operate them all on your model railroad.

A very small jerkwater railroad is a wonderful type of pike for the beginner to operate, since it requires the least amount of equipment. On such a railroad, one old combine or coach can be tacked onto the rear end of the way freight; this giving us what is known as a mixed train. Mixed trains are still operated on many branch lines. If you prefer you can also start passenger service with only one coach or combine operated behind a small steam or diesel locomotive.

The day local is another common type train and is a simple one to make up, consisting of a locomotive and any number of coaches. Locals of this type hardly ever are seen with Pullmans, dining cars, or other luxury equipment, although they may carry a combine, or any other head end equipment.

The mail train can be a real ballast scorcher and will often have as large or as fast a locomotive on the front as any of the crack limiteds. Its equipment will consist largely of baggage, express, and mail cars, and as an accommodation will carry one or two coaches on the rear.

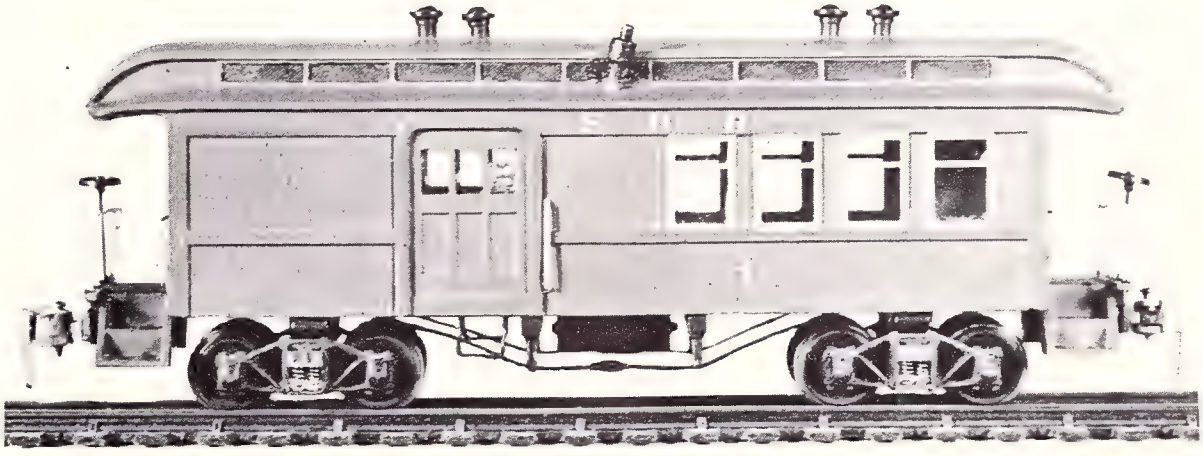
Closely akin to the mail train is the milk train which will have a solid string of express and milk refrigerator cars in place of the mail cars. Again, there might be a coach or two. Sometimes milk and mail trains will carry a coach for the crew to ride in, even though no passengers are carried on the train.

Mail and milk trains ride fast schedules and often have right of way over lesser trains, even other passenger trains.

The real glamour girls of the rails are the crack limiteds, especially those which boast names. Here we find the sleek streamliners and all the luxury cars which were mentioned earlier.

Many of these name trains have been in existence for many years and they have developed many traditions through the years. Travelers on the New York Central's crack Twentieth Century Limited walk down a plushy red carpet as they get on. Many of these trains are too long to successfully model in their entirety, A real train might have two dining cars and ten Pullmans in its consist, A model will have only one diner and perhaps two or three Pullmans, in addition to such other cars as a solarium, parlor, and head end cars.

The types of cars found on these luxury trains will vary depending on the length of the run and the type of territory served. The Reading's Crusader is the only stainless steel streamliner operating between New York and Philadelphia and it makes several round trips daily. The train is made up of five cars: two solariums, one at each end; two coaches, and a dining car. The train doesn't have to be reversed because there is a solarium



passenger cars

If you like passenger cars, you can't help but fall in love with a beautifully maintained old time wooden coach such as this arch roofed Delaware & Hudson car. Arch roof on wood cars is somewhat a rarity.

Steel open enders were rare but they're still to be found hauling commuters on the Delaware, Lackawanna & Western, out of Hoboken, New Jersey. Road switchers have completely replaced old steam power.

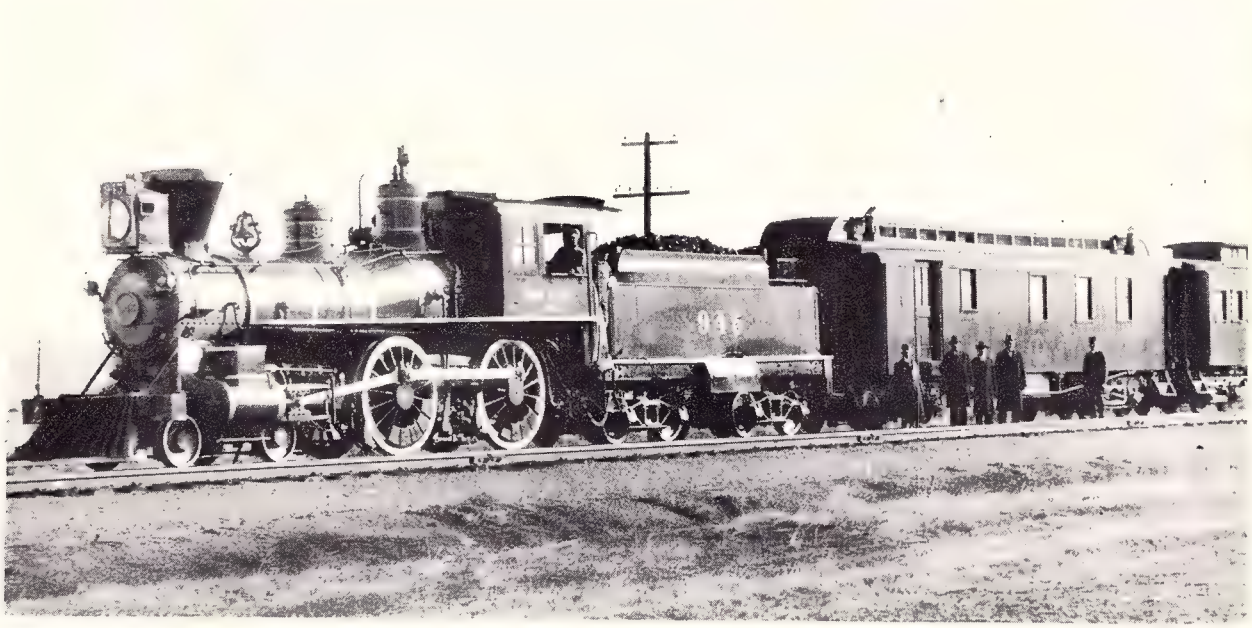
Old time cars were short, as evidenced by this reconstructed Union Pacific train using some of the original equipment of the first passenger train used west of the Missouri River. This picture is recent.

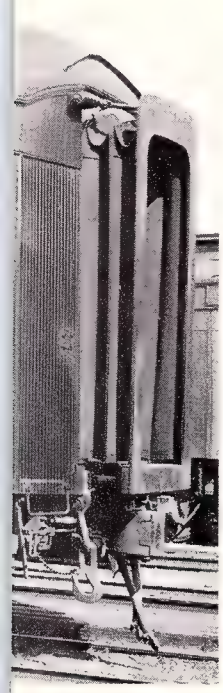
If you pack this much detail into your passenger cars, you're a better model builder than the editor is. Most model builders leave the roof bare, frequently omit handrails, frosted windows, chains, etc. at each end. Formally a streamlined pacific handled the train but it is now pulled by a twin unit diesel.

A crack train which would run between two far distant points would invariably call for Pullman sleepers and a diner. A crack train on a model railroad might be made up of a combine, a coach or two, dining car, and one or two Pullmans. If this train was the railroad's name train, there might also be an observation car and possibly a solarium.

Sometimes a train may be an all Pullman train with no coaches at all. Such a train might be expected to have a dining car somewhere in the middle of the train and a lounge-solarium tacked on the rear end.

Dining cars are a source of annoyance to railroads since they are usually operated at a loss. As a result, many railroads try to get as much mileage out of a dining car as possible. Such a car will often be coupled to the rear of a train for a portion of its run, and then be dropped off at some point along the line, to be picked up by another train for the return journey.





Pullman sleepers are often picked up and dropped off along the line, too. Sometimes these cars start out on one train and are transferred to other trains enroute to their destination, thus saving the passengers the trouble of changing cars. Coach riders usually have to change cars.

Commuter Trains

Few modelers have gone in for operating commuter trains, possibly because they prefer the variety offered by limited and express type trains. Commuter trains are drab as a rule and aren't especially noted for having glamorous motive power on the head end. Commuter trains are operated primarily near the large cities such as New York, Philadelphia, Chicago, and Boston.

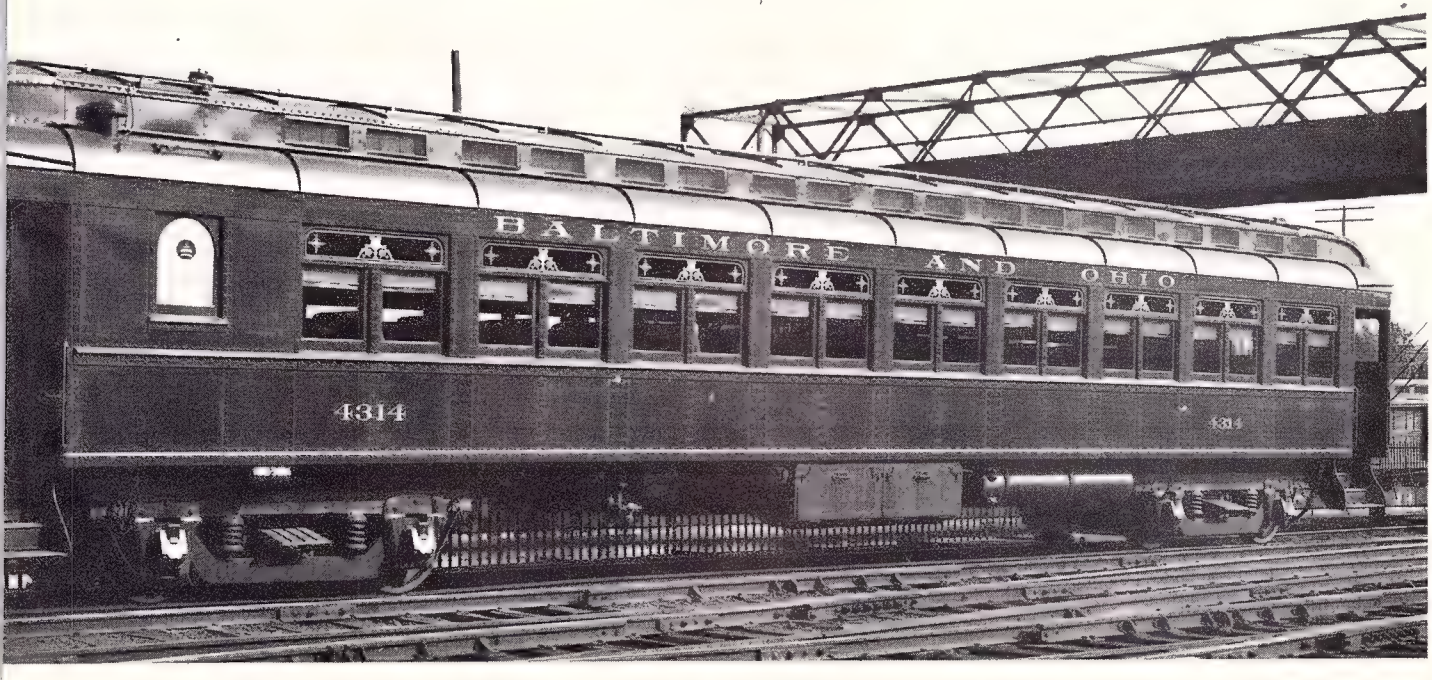
Whatever the commuter run may lack in glamour, it more than makes up for in numbers as the morning and evening parades get moving. Real commuter trains may run ten or more coaches in length, although on a model railroad from three to five cars would be adequate. Conventional type coaches and combines are normally used, being powered with engines such as a pacific, ten-wheeler, or atlantic. Road switchers and single A units may also be used.

Rarely, a commuter run will boast a name and even special reserved coaches but such conditions are rare. The biggest problem with commuter runs from a railroad viewpoint is the need for large numbers of cars and locomotives which are used for only a few hours daily, in the morning and evening rush. From a model railroad viewpoint, this could be very interesting.

When commuter volume really gets heavy, the railroad may consider electrifying its suburban operations, as has been done on the Lackawanna, Long Island, New Haven, Reading, Illinois Central, and other railroads. Multiple unit cars are limited on the model railroad, at least theoretically, to those portions of the line having either outside third rail or overhead wire. In practice, such cars might well be operated by two rail.

Doodlebugs

Self propelled rail cars are nothing new, having been



operated on the railroads in varying forms for many years. Several gas-electric kits are available for units which are typical of the period between 1920-1935, and these can still be found in operation.

Budd RDC (Rail Diesel Car) cars have also become popular on many railroads and are also available in kit form. The RDC is finished in fluted stainless steel and is available in four different versions, varying from all coach to all baggage-mail. Budd cars are used as commuter carriers, in day local service, and even in supplementary long distance service.

Either the gas-electric, or the more glamorous Budd car is ideal for model railroad use since the cost is low and no separate locomotive is required to do the hauling. Budd cars in real life are not manufactured to haul trailers although they may be operated in multiple unit or in regular trains. Gas-electrics often do haul trailers, sometimes even freight cars.

Period Equipment

Old time passenger cars are even more obviously dated than old time freight equipment. The very earliest passenger cars were little more than boxes with windows cut in. There are several very obvious periods that passenger cars fall into, and all are fascinating periods to model.

Operating Trains

It's impossible to give any hard and fast rules as to what equipment should be operated in any given train, although the suggestions given in this chapter are all quite common. There is always at least one exception to any rule that might be given.

It's perfectly alright to mix conventional and streamlined equipment together in the same train, this frequently being done by the real railroads. One frequently will see a string of conventional cars in which the Pullman sleepers will be streamlined. Conversely, on holidays and at other times when traffic is heavy, streamlined trains will often have conventional cars attached. Many railroads paint their conventional or standard steel cars in streamliner colors, especially when they are to be used at least occasionally on crack trains which are streamlined.

Head end cars, as has been mentioned, are normally found at the front end of a passenger train but not always. On occasion, such cars may be coupled to the rear of the train. When the train is to be split up at various points along the line, you might even find combines and baggage cars in the middle of the train.

Passenger Car Length

Passenger cars are long. Coaches have been mentioned as being between sixty and eighty feet in length. Pullman cars are about eighty feet in length, as are most dining cars and observation cars. Standard coaches, combines, baggage cars, mail cars, and some business cars can all be found somewhere in sixty foot lengths.

HOers whose curve radii measure 24" or better will experience little or no trouble in operating the eighty foot long cars around their curves. If your curves are less than 24", better forget about the long cars and stick with the shorter cars.

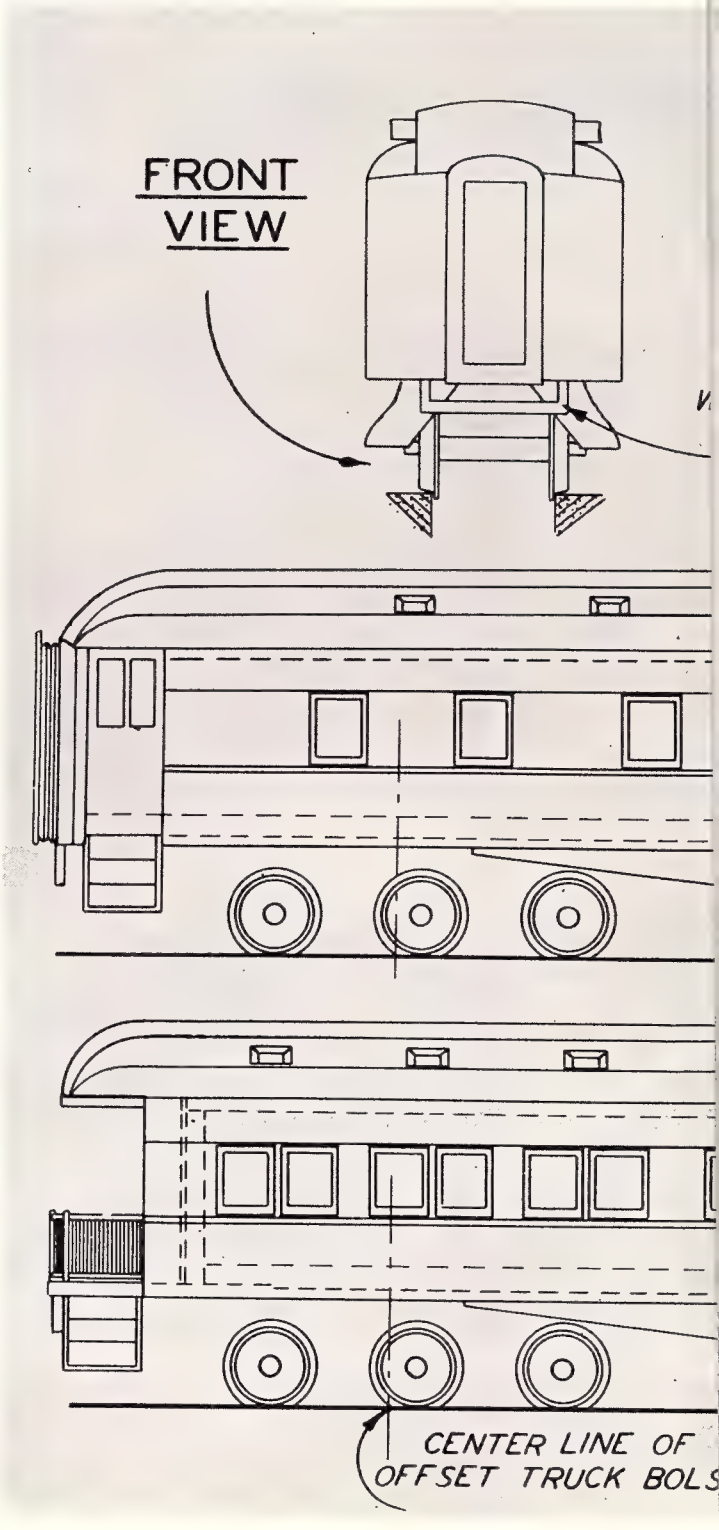
Real railroads don't operate sixty foot Pullmans but because of the frequent necessity for putting in sharp curves on a model railroad, the manufacturers have made such cars available in model form. These shorty cars are a compromise with realism and should be accepted as such.

Passenger Car Kits

An ample selection of kits and models is available in almost all gauges, and especially in HO and O gauge. Cars follow pretty closely the same type of construction as found in freight car kits, except that sides are made from such varying materials as stamped tinplate, embossed aluminum, polyethylene and tenite, cardboard, wood, and varying compositions. Roofs are usually wood but can be plastic or metal. Some cars come ready assembled and many streamlined cars come with the body made of extruded aluminum.

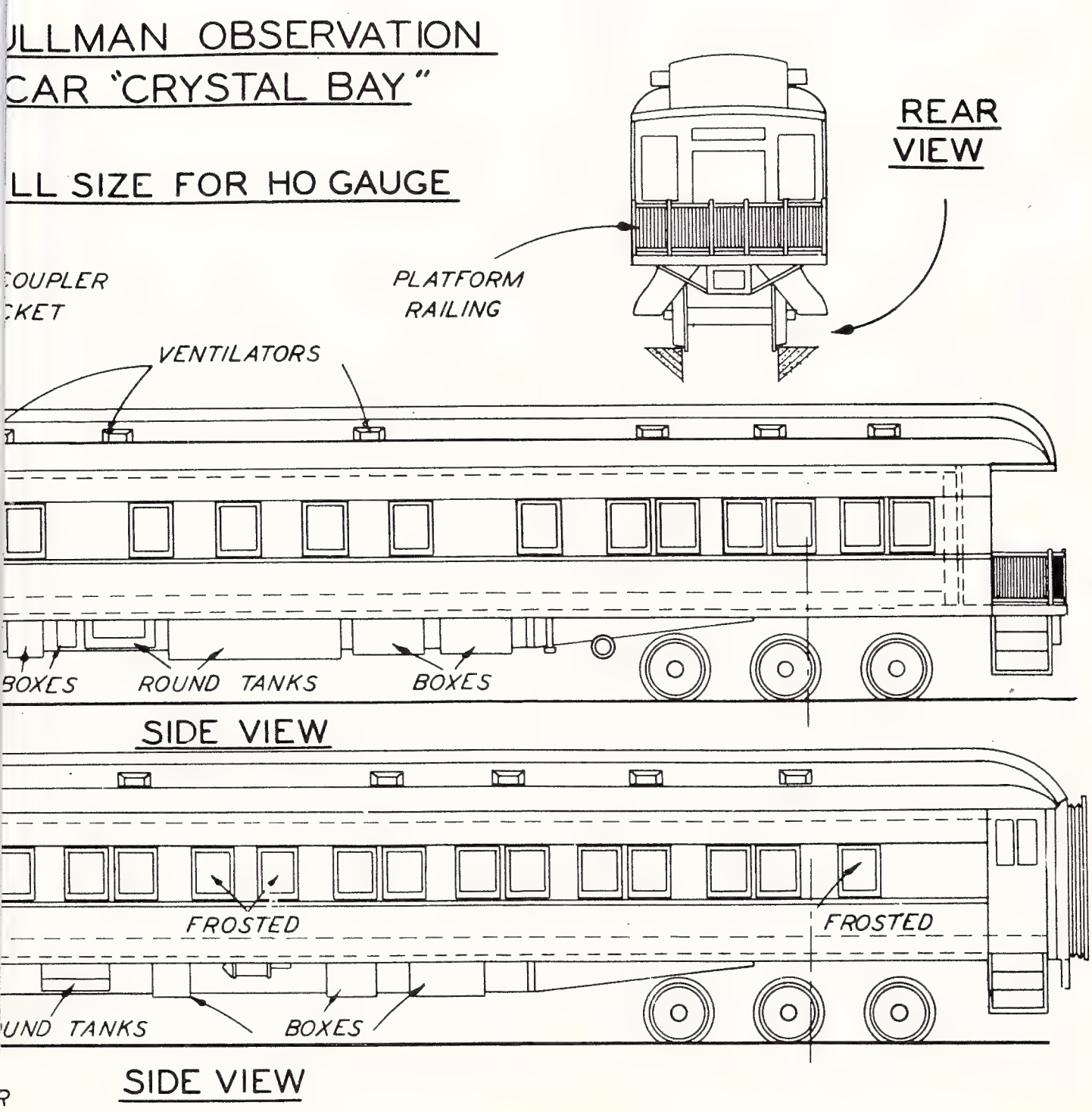
HOW TO BUILD the Pullman observation car "Crystal Bay" in HO gauge. This 80 ft. car is a long one and can be used on any train which you'd care to run. It's easily built with a minimum of materials and in a nutshell, here's how.

The sides are built up from several layers of cardstock and we recommend the use of bristol board or filing card stock. The sides are built up in several layers. The inner wall has the window openings cut out at the sashes, the outermost side has the window openings cut full width. Use



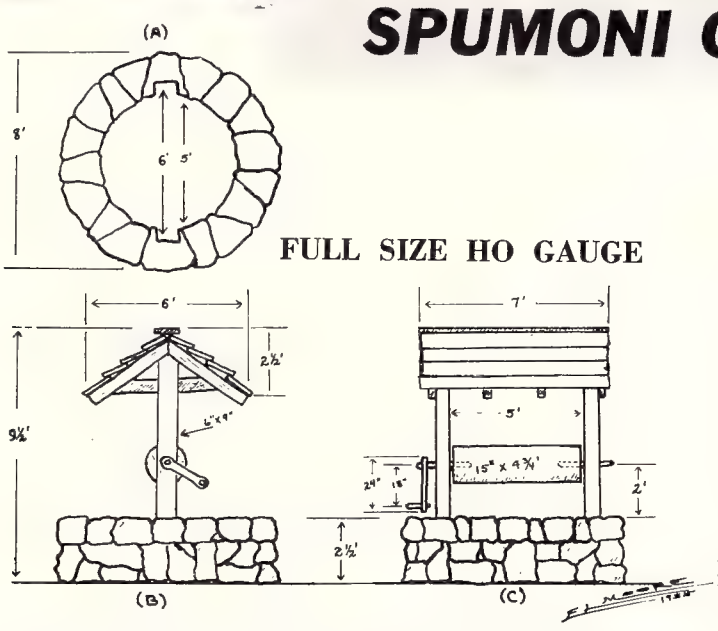
an X-acto knife to make your cuts, guiding the knife edge with a straight edge. The letter board and belt rail are additional strips of bristol cemented in place.

It hardly pays to make your own roof section since your local dealer has these correctly milled to shape in all gauges. Merely round the end contours to the shape shown in the plan. When shaped correctly, sand the roof until metal smooth. The end may be built up of wood or can be a commercial casting. The observation end can be made of bristol or wood. It's recommended that you put in a few wooden blocks to strengthen the car body. End castings can be purchased at your hobby shop, along with trucks which should be 6-wheel Pullman type. Ventilators, couplers for both ends, and a diaphragm are also needed, along with a set of passenger car steps and Pullman decals. Paint the car Pullman Green, Tuscan Red, or to match your other cars. Air conditioning strips may be added to the roof if desired but are not absolutely necessary and are not shown in drawing.



Relax and take a week-end trip to the lovely Spumoni Country Estate. This is what modeler Moore did with balsa, figures, and imagination.

SPUMONI COUNTRY ESTATE



THE Spumonis have gone modern. It seems that Mrs. Spumoni became irritated at having to constantly draw water from the well for washing, cooking, for the cattle, and even occasionally for baths. Then too, there was the ever lurking fear that Pistachio Jr. might at some time clamber over the well-curb and fall in, thus contaminating the only nearby source of drinking water. Arguments pointing out the antiquity and charm of the old well fell on unresponsive ears. Seeing she was determined to raze the structure, I unobtrusively stepped back and snapped an informal picture, fortunately catching Ma, Pa, Uncle Charley and Junior in characteristic poses. When I returned for another weekend to the Spumoni country estate, I found that she had indeed replaced the venerable well with a sleek, modern pump.

For those among you who wish to add a bit of old time charm to your country home, and do not particularly mind the labor of drawing an occasional bucket of cool sweet water, I'm offering, with Mrs. Spumoni's permission, plans and measurements of the old well. It is such a simple structure to build, and requires so little material, that you can build it yourself, and need be neither a stone mason or carpenter to do an admirable job. And being a simple project, there should be no need for detailed building instructions. However, for the benefit of the newer members of the Scratchbuilding Guild, a few hints concerning materials used, methods, etc., may not come amiss.

Measurements on the drawings are given in feet, so there should be no difficulty in that respect, no matter what scale you work with. Feet and inches, that is.

For the stone well-curb, ("A"—top view), select a piece of balsa wood ⅜" thick, or cement two or more thinner pieces together to get a depth of 2½ scale feet, or more. Cut out a piece 8 ft. square and sand it down to the required depth of 2½ feet. Find the center and drill a hole, then with teeth, fingernails, file, or what have you, enlarge it to a roughly circular diameter of 5 ft. Now shave down the outside corners until it becomes a somewhat circular 8 ft. diameter (outside). On the inside at opposite ends, using a small file, work out indentations just the size to receive the bottoms of your uprights. Now, with a soft lead pencil, mark the outlines of the individual stones. If you have an electric burning pen, it will be a simple matter to burn the divisions between the stones in a realistic manner, both inside and outside the walls. Otherwise use a sharp blade and make light V incisions until you have all the stones outlined.

Assuming you now have the uprights in place and braced, top and bottom, take a piece of balsa about 18 scale inches square, shave it roughly round, and revolve it between sandpaper held in your fingers until about six scale feet of it is nice and round and about 15" in diameter. Cut off 4¾ feet of it and you have the drum as

shown in figure ("C"). Lay this aside and stick a round toothpick in your hand drill chuck, slap the hand drill in a vise, hold a flat file against the toothpick, and work the toothpick down to a scale 3 or 4 inches. Cut this up for shafts that stick out of each end of the drum and through the uprights. Add a handle and it should now revolve easily, but don't turn it with your big clumsy fingers on the handle . . . twirl it, if you like, by the other end.

If you are using a burning pen, then for the roof, match two pieces of 1/16" balsa, the grain running from end to end. You can burn the boards in realistically and with a minimum of time, then add the rafters after cementing the roof in place. Otherwise put up the rafters, then put on the individual boards, topping them off with one on the ridge as shown in Figure "B."

She's practically finished now, except for painting. Dime store artist oil colors or railroad colors are equally good. In either case, thin until only a trace of color is apparent. Mostly grays for the masonry, but to perk it up tinge a few stones with a touch of red, blue or green. If too bright, wash over it with some of the gray. For finer detail you can trace the divisions between the stones, using a fine brush, with a grayish white, or black, if you like. For the roof and other wood parts I use a dark oak oil stain . . . brush some on, then with the same brush follow with the gray wash you used on the masonry, whether oil or railroad colors . . . it matters not . . . a little experimenting and you'll get a nice weathered gray.

Now to complete the well, you have only to cement one end of about 25 to 30 scale feet of fine buff thread to the drum, cement the other end to the handle of your bucket and there you are. The bucket? They cost a nickel each at your hobby shop . . . or at E & H Model Hobbies, under boat models. The 1/8" size is about right. (That is, for HO). Drill a hole at each side and fit a wire bail.

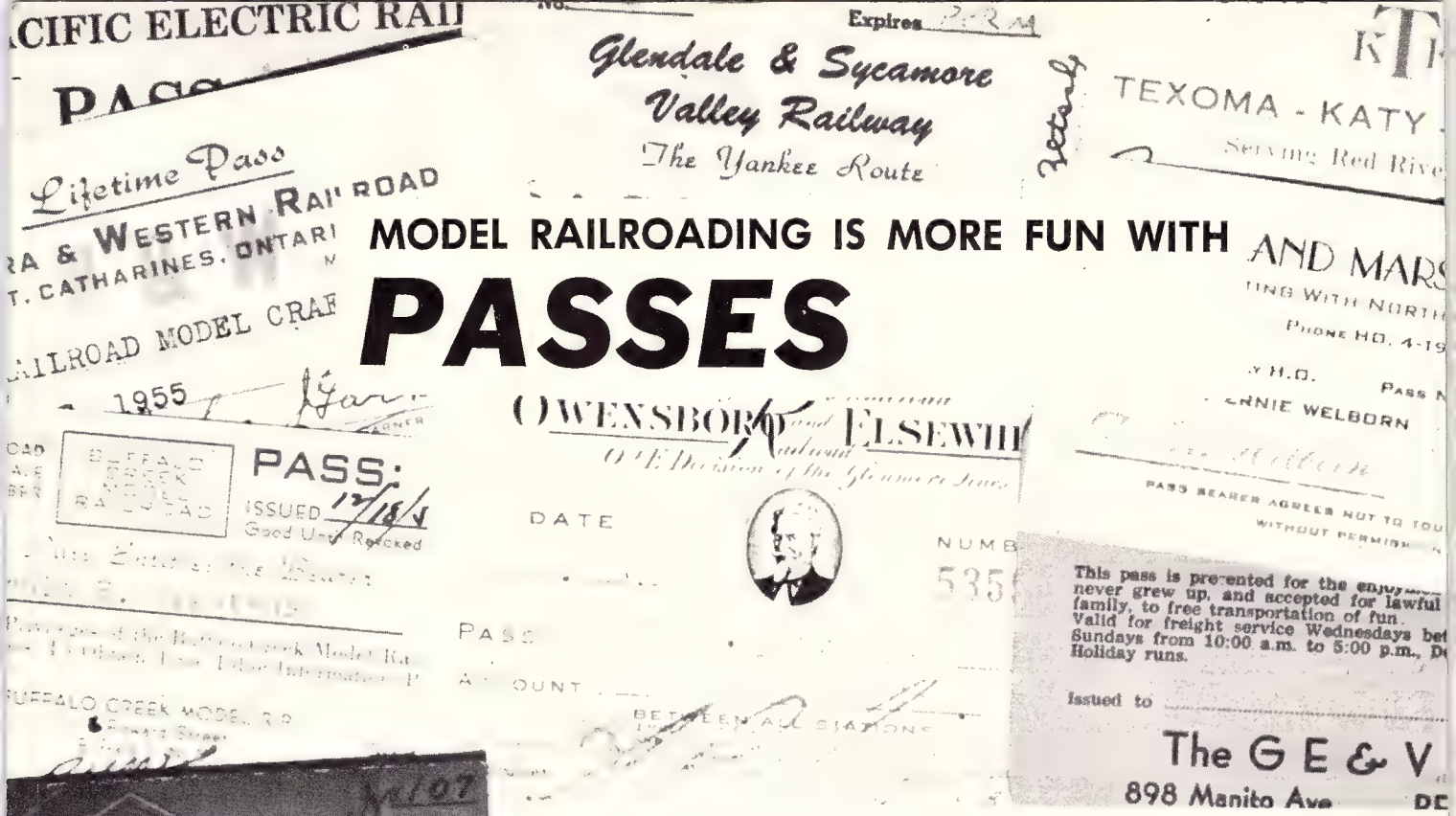
The moss? Don't be impatient, Bub? In forty — fifty years, it'll have accumulated plenty of moss .

by E. L. Moore

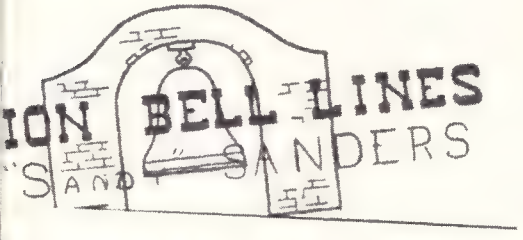
The Elizabeth Valley's official photographer snapped these picturesque views up in the hill country served by the EVRR. No station has been built but trains stop on flag orders. Note fine attention to small detail.

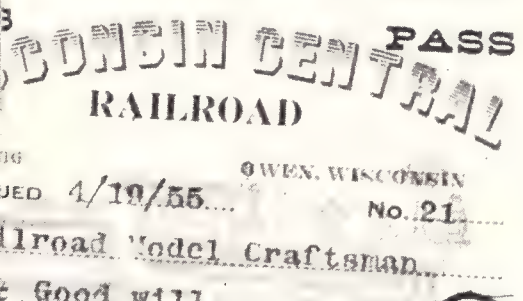
The new Spumoni pump was built to make life easier for Momma and it appears as though it had. Looks like these gents have their wimmen folk trained properly. Figures by Weston. Old well is of balsa construction.

MODEL RAILROADING IS MORE FUN WITH PASSES



THE PATH OF THE PADRES





ONE'S imagination is probably the most important aid in the development and construction of any model railroad; regardless of gauge, scale, pickup, or fidelity to prototype. We can imagine ourselves as heading a vast continental rail empire such as the great Canadian National Railway, or a heavily travelled route such as the Pennsylvania. Some of us prefer a single track mainline pike over which roar high speed limiteds and freights, and others are content with jerkwater railroads operating small decrepit power over tiny rails. Whatever our desires, it's all railroading and every pike has a charm of its own.

Whether or not our pike has actually reached the "it's finished" stage or is still a gleam in our eye doesn't really matter much. While the pike is being built we can still promote it for all it's worth and an ever increasing number of modelers have found that it adds to the fun to have model railroad passes printed up.

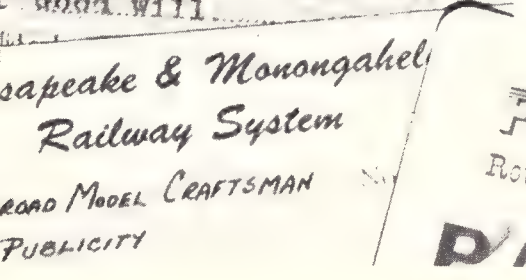
On real railroads, passes are issued to employees, and occasionally to shippers and others employed by the railroad industry; specifically employees of other railroads. The exchange of model railroad passes therefore adds to the prototypical aspect of our hobby and is an excellent means of telling others about our pike.

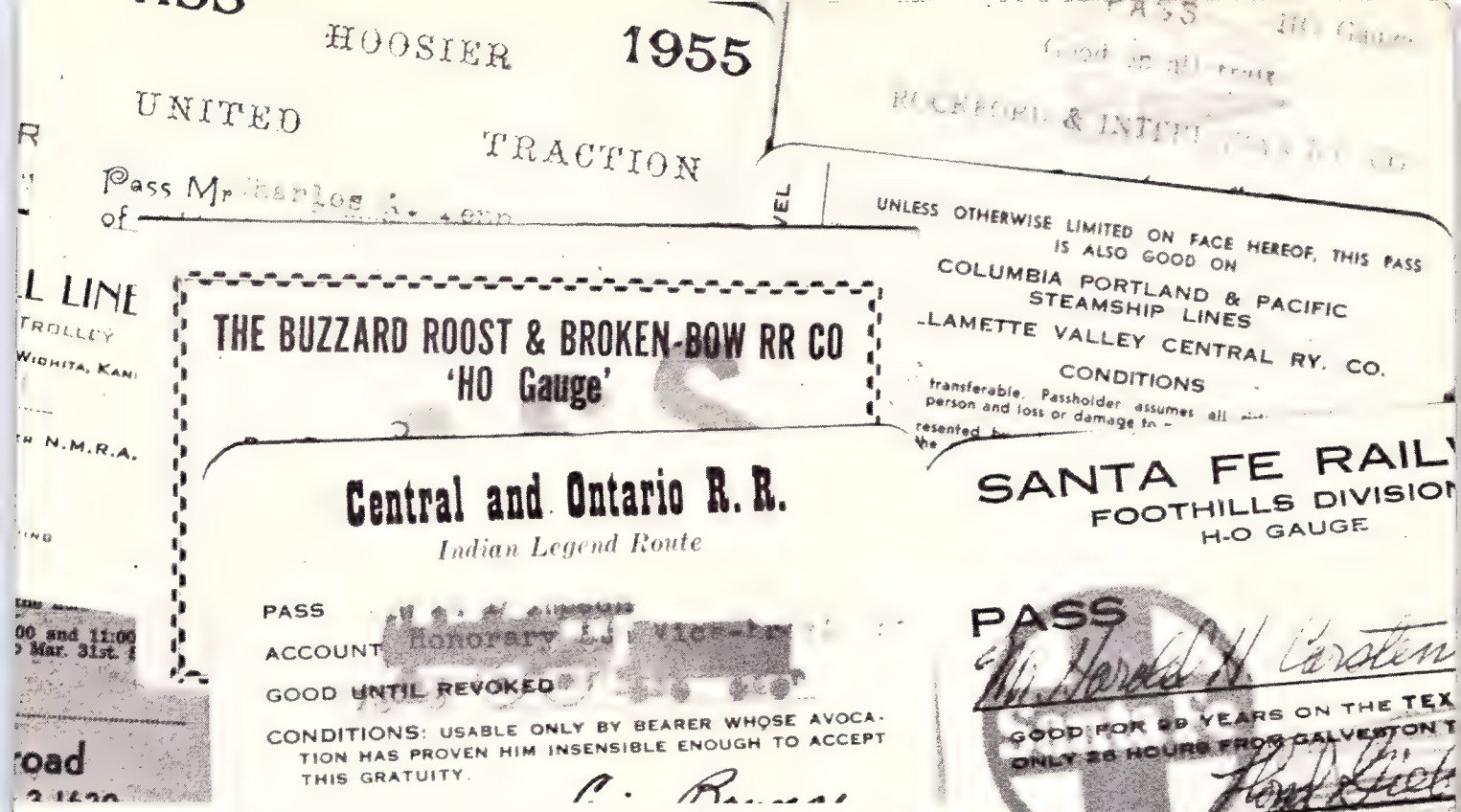
Passes can be as elaborate or as simple as one could want or afford. Some of those which daily pass over the Railroad Model Craftsman editorial desks are simple mimeo or even typewritten affairs. Others are elaborately printed in several colors using rare old cuts and type faces. Other modelers have made them by photographic processes, or by Ditto or Varifax. A standard wallet size is to be preferred since most passes are printed in that size: 3⅞" x 2⅛".

Passes can be both humorous and functional and many of the best passes fall into both categories. Bert Marsh's Indian Valley & Summit Railroad pass lets all potential visitors know that his pike is in HO gauge, and also that he is a member of the Pacific Coast Region, NMRA. The address of the IV&SRR is also given so that the holder doesn't have to guess or dig for the address at some later date. Many passes also give a phone number. Incidentally, it goes without saying that the mere issuance of a pass does not necessarily permit the holder to go visiting any pike at any hour. It does serve to indicate that the issuer might let you in at some time to see his pike if you call or write him in advance.

For the most part, the issuance of passes has become a sort of secondary hobby and many fans build up extensive collections, which can be become a colorful part of the model railroad room. They can be tacked to the walls or be neatly inserted in looseleaf binders or even in a special photo album.

It's usually the traction fans who





manage to come up with something novel in the way of a pass. Bob E. Bast, chief flunky of the Drag Bottom & Tea Kettle Gulch Street Railway and Brewing Company has a foot long ticket for his trolley line that's a humdinger, complete with a cut of his line's herald. Bruce Smith's HO Pacific Electric Railway also has an odd shaped pass which states that buffalo must not be shot at from moving trains.

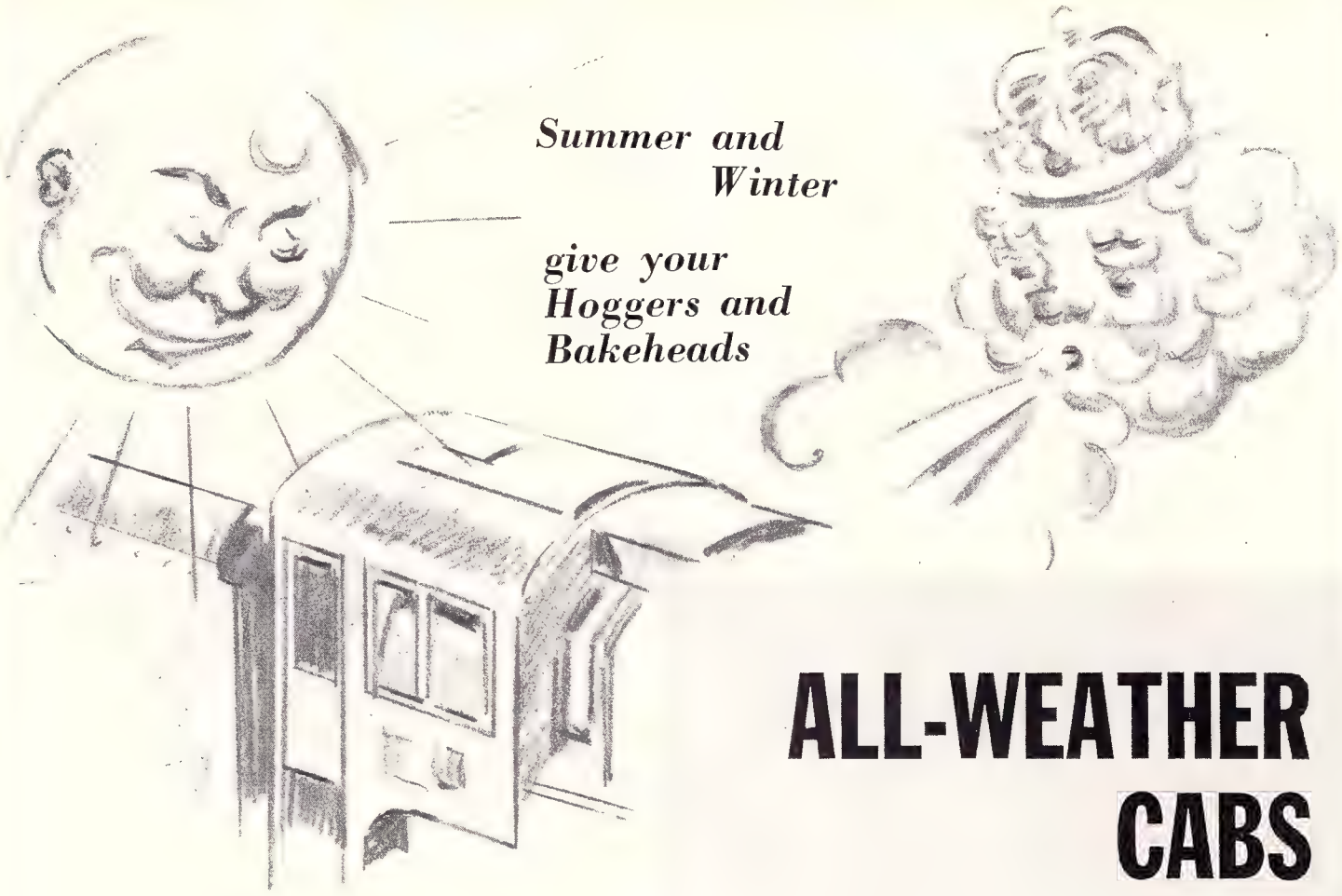
Many passes contain conditions, printed on the reverse side which the holder must abide by. Taken at random, some of these include the following gems. It's permissible to use as many or as few of these as you may like.

Not transferrable. Passholder assumes all risk of injury or accident to person, and/or loss or damage to property. This pass does not permit operation of trains. Trains not guaranteed to run for unexpected passengers. Check your troubles before entering station. Special excursions by appointment only. Put your cigarette butts in the ash tray. Not good for credit anywhere. If you want to ride on this mess we call a railroad, phone PL 2-6011 and I'll be waiting with a net. Visitors will keep hands off all equipment and controls unless invited to operate. Visitors are expected to make advance appointments by letter or telephone. Due to the Apaches burning down the depot, this pass issued as interchange only until a suitable new depot is built. Any resemblance between this railroad and the B&O Cumberland Division after which it is modeled is purely coincidental. He will desist from spitting against the wind from open windows. Ladies and other females will please refrain from referring to the equipment as cute. Offenders will wash bottles in the brewery for a period of not less than one, and not more than four hours, depending on the number of dirty bottles.

Many of the passes are numbered, either by machine or by hand. Some few fortunate souls owning their own presses issue new passes each year. Most fans mark their passes as good until revoked. Most passes also include the signature of the chief brass hat, or whatever his title may be.

Few fans have the time or facilities to do their own printing job but almost any local job press shop will do a good job. Since most of the work involved is in setting up the type and in getting the press ready, the price will not vary much on small quantities. We'd recommend that you order 500 passes. If you like, the printer can number these for you at a slight extra charge. There is an extra charge when you order a second or third color.

If you want a cut of a locomotive, the printer might be able to supply you with one from stock. If he can't, he'll tell you how you can include one if you wish. This will require the making of a zinc cut costing up to several dollars.



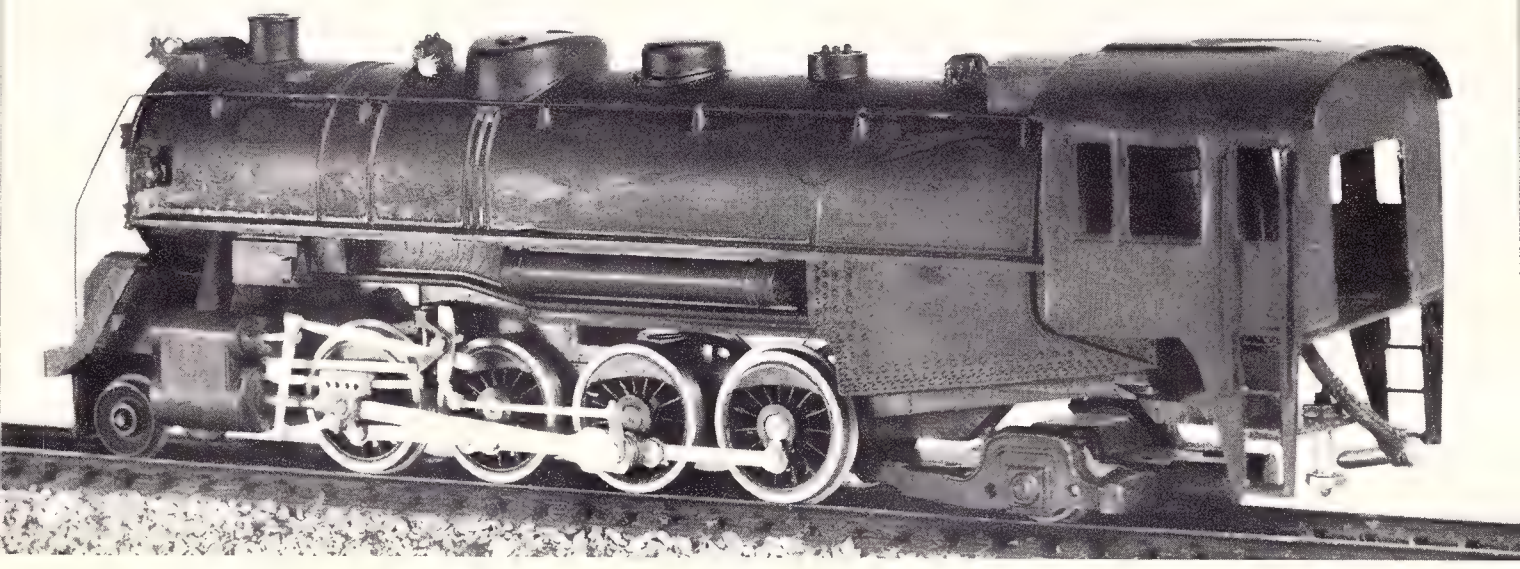
ALL-WEATHER CABS

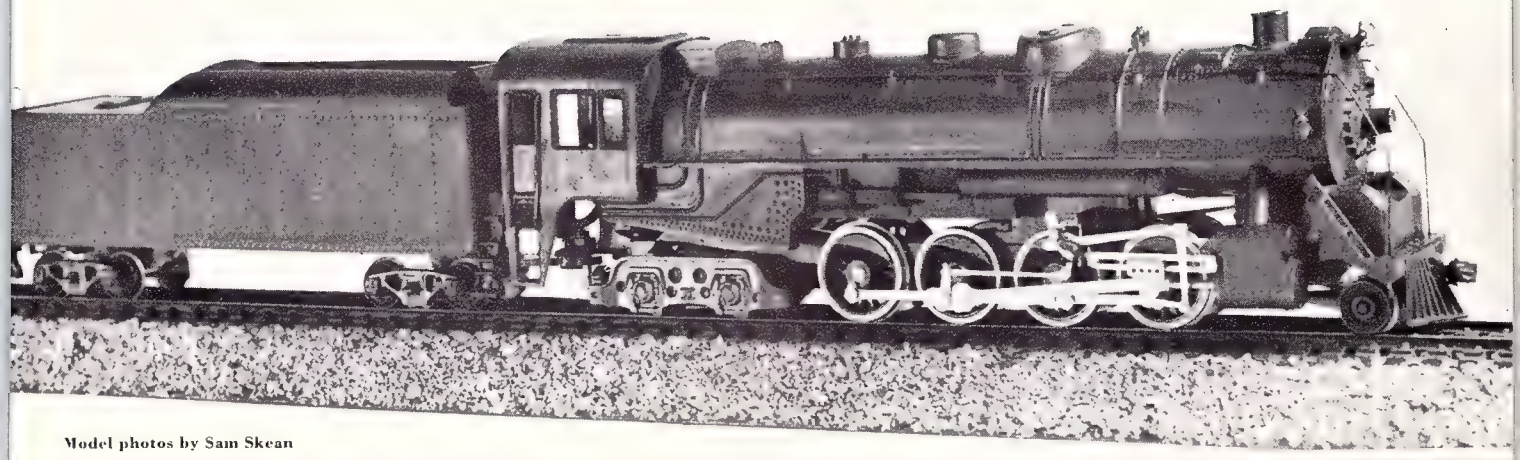
NEGLECTED by all manufacturers but one, the all-weather or vestibule cab is nevertheless found on many prototype steam locomotives, particularly north of the border where winters are more severe. Adding a vestibule cab to one of your steam locomotives, either when it is being built or after it is built is not too difficult a job and changes the appearance of the engine considerably.

The locomotive shown so converted is an early model Mantua mikado, but the later mikes as well as the pacific are also easy to change. In fact any engine which has a separate cab assembly is very easy to change. Those with cabs cast as an integral part of the superstructure are a little harder since the cab has to be sawn off.

The cab I used is from a Winton berkshire, but the supply of individual parts or even kits direct from the maker is uncertain, at this writing. Accordingly I have taken the dimensions from this cab and shown them on the drawing. Parts should be cut out of flat sheet brass or tin and soldered together.

The front and back should be made first, exactly the same. The rear will then be cut out about as shown, according to diagrams in the Locomotive Cyclopedia; the front should be cut out to the same contour as the inside of the back of the boiler, so that there will be proper motor clearance. The sides should of course be identi-

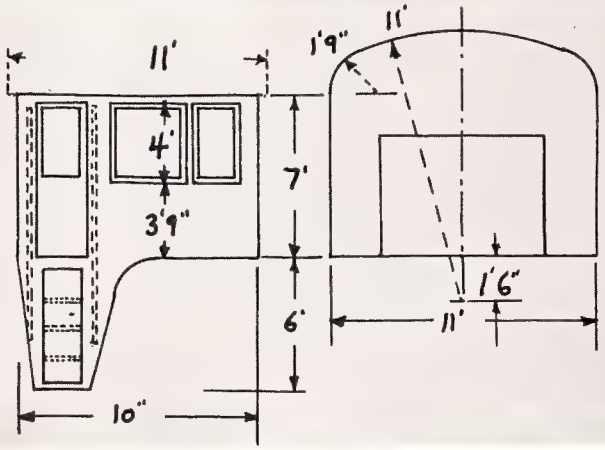




Model photos by Sam Skean

Mantua's husky mikado takes on an even bigger look when a four wheel trailing truck is added in addition to the all-weather cab. We'd add a few pipes, a new pilot, and feedwater heater.

by John Kemp



If your road operates in rugged mountainous terrain, or in the far North, consider the comfort of your engine crews by supplying them with all-weather cabs. They're simple to make.

1. Easiest way is to make cab from cardboard, cutting openings with single edged razor blades. Assembly would then be done with cement instead of solder and screws.
2. John Kemp's preferred way is to drill or punch one small hole in each opening and then saw out the openings with a fine jeweler's saw—No. 2/0 or 3/0.
3. Another way is to drill a row of holes inside the opening and tear the waste piece out like a postage stamp. Then with a small file you can file down to the line.
4. A slick way is to drill or punch a small hole as close inside each corner of the opening as you can. Then put the piece in a vise with the line to be cut even with the top of the vise jaws. A smart blow with a small enough chisel will then make a cut and on the final cut the piece will drop out, leaving only a little filing to do. Such small chisels are scarce, so you may find it convenient to grind the end of a small screwdriver to a chisel shape and use it.

Rear view of revamped mikado shows how new cab fits in place. Simple all brass construction is used. Even a beginner can do the soldering.

Most Canadian railroads used all-weather cabs on their steamers because of the severity of the cold winters. Their distinctive styling does much to individualize an engine. Note the cab handrails.

cal, except that one will be right, one left, with the doorways at the rear. The Winton stamping has the two sides and the roof in one continuous piece which is a good idea if you can do it, taking length of roof from *your* ends. Most modelers will prefer to make the roof a separate piece, shaping its edges carefully so they flow into the cab sides.

The window sash and the door should be a separate piece soldered inside the main side. A piece of ladder stock should be soldered behind the step opening. Holes may be drilled for the handrails which may be installed at this time or later as you wish.

Next solder the cab sides and ends together, taking care to get the corners square. Do most of the soldering inside. Solder the roof in place. Then form a floor, trying to figure how it will have to be cut out to clear the rear of the motor. Solder floor in place, doing soldering outside and filing off excess.

Attaching a cab is a simple matter once you have fitted the floor and front. Try to keep the cab roof about even with the top of the turret on the engine, if any, which is to say about the height of the original cab. The best way of attaching the cab seems to be with two or more screws through the front and into tapped holes in the back of the boiler. For 00-90 optical screws, a No. 60 is the tap drill, No. 56 the clearance drill.

Double header with two of Roger Ramsdell's fine old time engines on the head end pulls out of the main terminal with a string of standard varnish. Outside third rail is used for pickup; signals are plentiful.

SUMMIT

The Summit & Centre RR and its annual open house benefit shows for the Red Cross have long become a local institution. It's a pike worth seeing; and it runs as well as it looks.

Staff Photos

Good trackwork keeps trains moving freely, even over lengthy bridges. The Summit & Centre's doodlebug is a modified Walthers kit, has the S&C blue and gray paint scheme. Truss bridge is metal, trestle is wood.

BACK in the mid-thirties, Henry Abraham dusted off an old standard gauge train set, set it up on a table and started his Summit & Centre Railroad. The old tinplate line quickly gave way to quarter inch scale and the line has been growing ever since.

The Summit & Centre is one of the most complete pikes in the country and has gained a reputation for its yearly open house, at which time all donations from visitors are turned over to the Red Cross.

When Hank moved into his present fifteen room house, the railroad was all but dwarfed by the spacious basement. Today the pike completely circles the basement, leaving the center free for spectators, of which there are many each March.

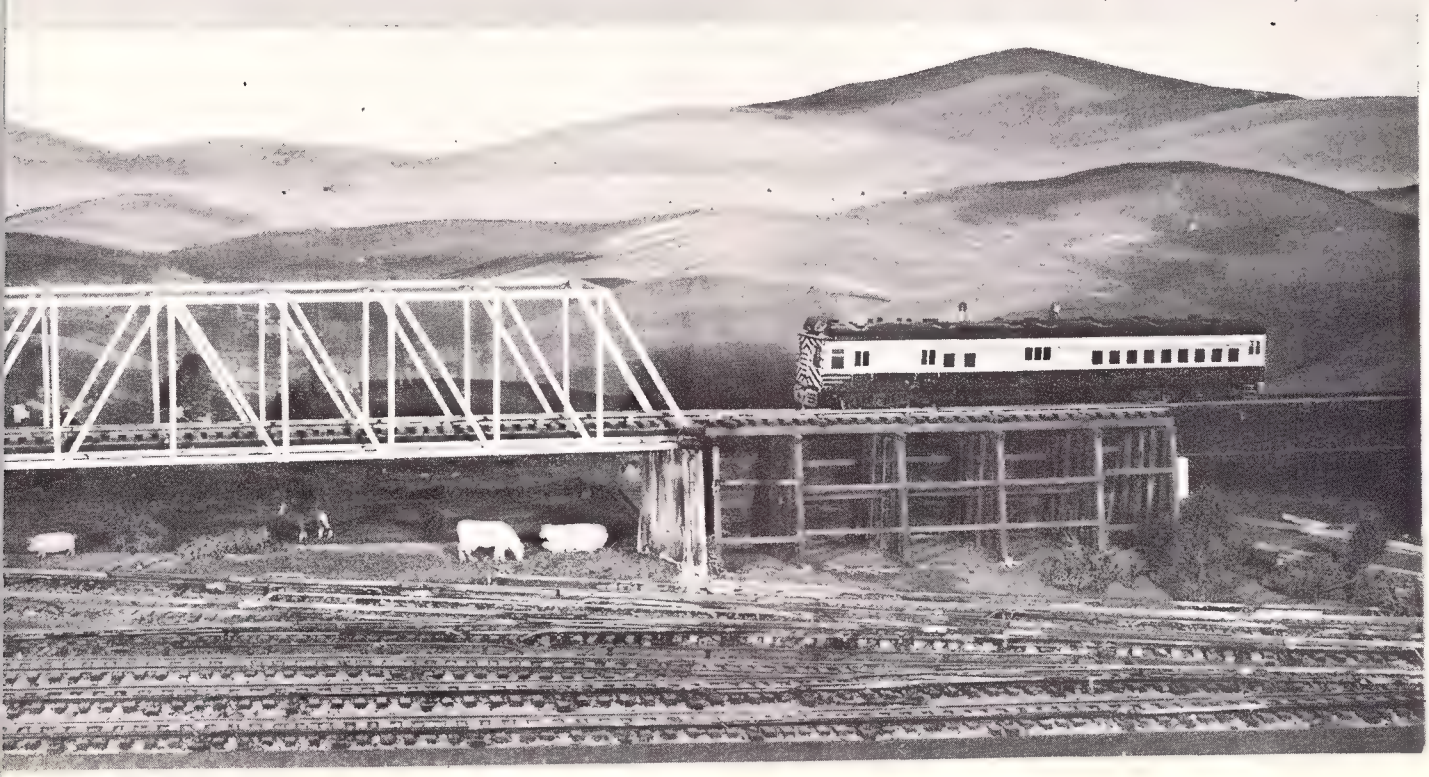
A number of local modelers help in operating and constructing the line. Not infrequently the Abraham dining room is used by the Board of Directors to plan some future yard.

Long a Baltimore & Ohio fan, equipment owned by Hank is usually found to have the blue and gray colors of that road. Hank doesn't mind diesels and an early Electro-Motive passenger A unit, built with bronze Adams castings and parts from half a dozen other manufacturers will pull almost anything coupled to it. By way of contrast, member Roger Ramsdell prefers old time steam power and some of his engines can be seen in the photos.

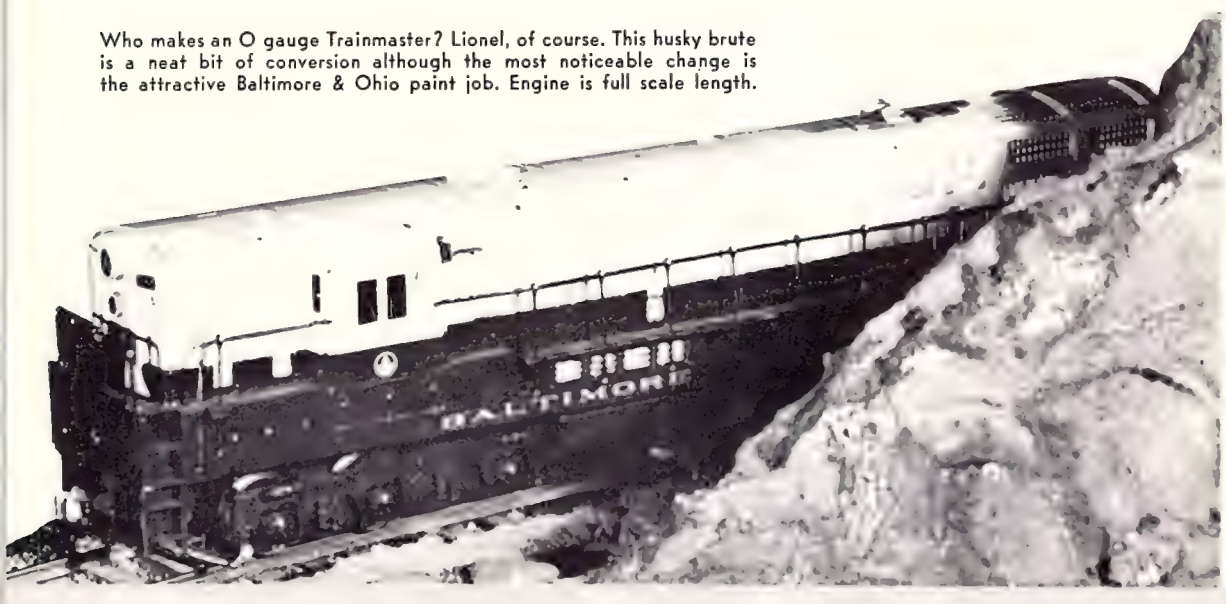
Scenery on the Summit & Centre shows what can be done in O gauge. The mountains at the far end of the layout even have an operating waterfall and a long curved trestle standing thirty inches high. There hasn't been a wreck off of the trestle to date! You can see the Summit & Centre in operation every March.

Henry Abraham started the Summit & Centre Railroad back in the mid-Thirties as a standard gauge pike; made an early conversion to scale. Main control panel requires plenty of know-how when the club is operating the pike. Centralized traffic control is used in the wiring.

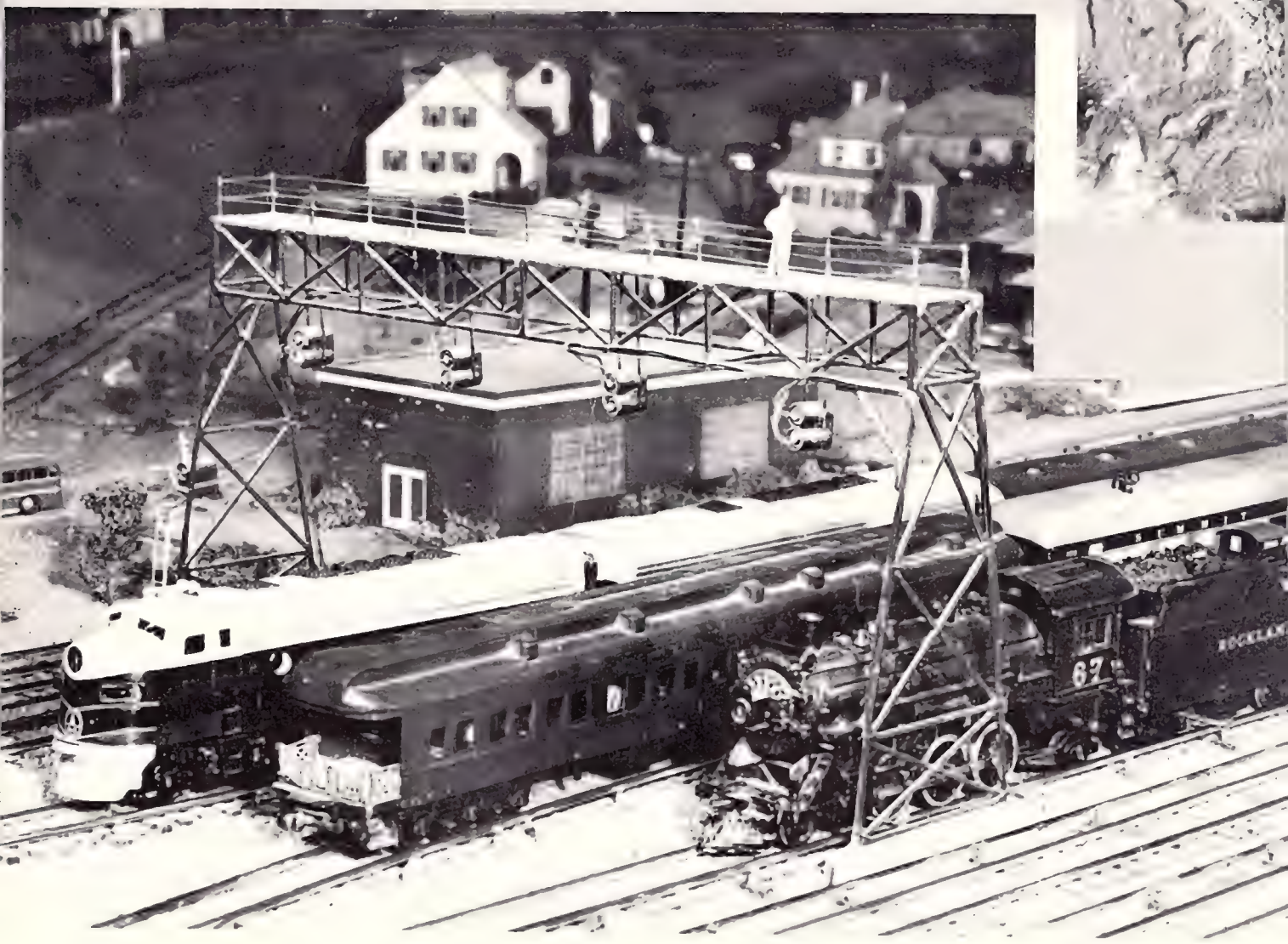
& CENTRE RAILROAD



Who makes an O gauge Trainmaster? Lionel, of course. This husky brute is a neat bit of conversion although the most noticeable change is the attractive Baltimore & Ohio paint job. Engine is full scale length.



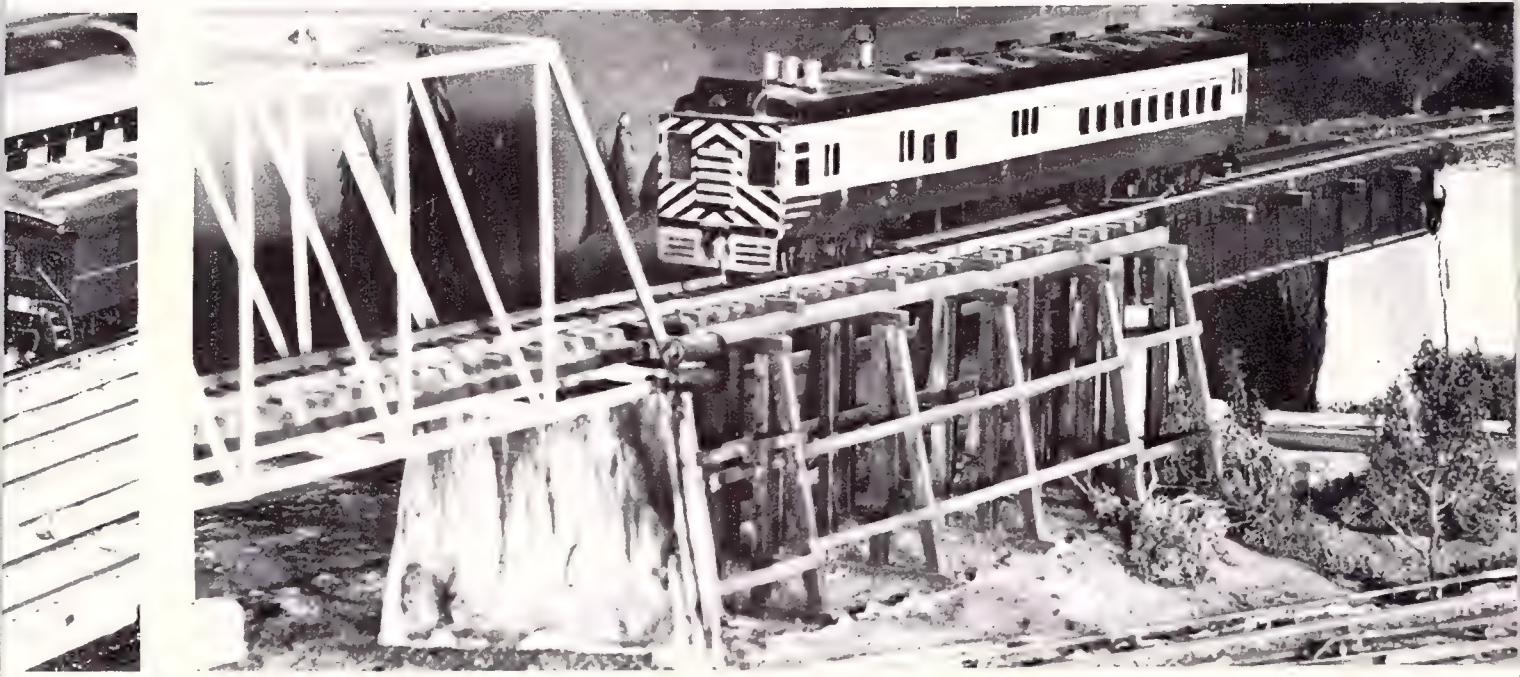
Summit & Centre is blessed with an excellent stud of locomotives and cars. Hank Abraham's preference is for Baltimore & Ohio prototype, well represented on the roster. Quarter inch scale, line runs well.

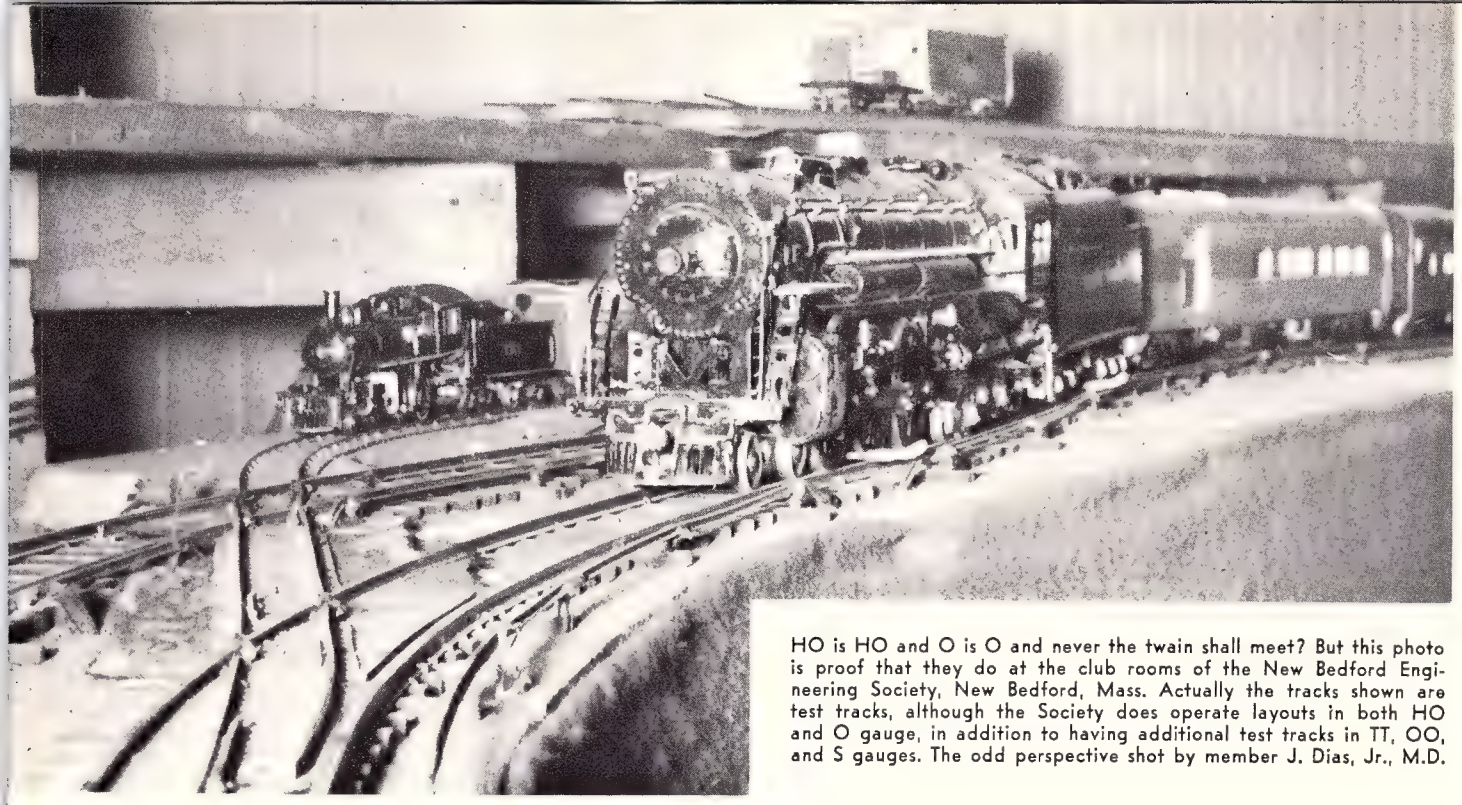


SUMMIT & CENTRE RAILROAD

There are plenty of big mountains on the Summit & Centre, providing an excellent background for an eight foot long curved trestle standing nearly thirty inches high. Another scenic delight is the real waterfall.

Good trackwork keeps trains moving freely, even over lengthy bridges. The Summit & Centre's doodlebug is a modified Walthers kit, has the S&C blue and gray paint scheme. Truss bridge is metal, trestle is wood.



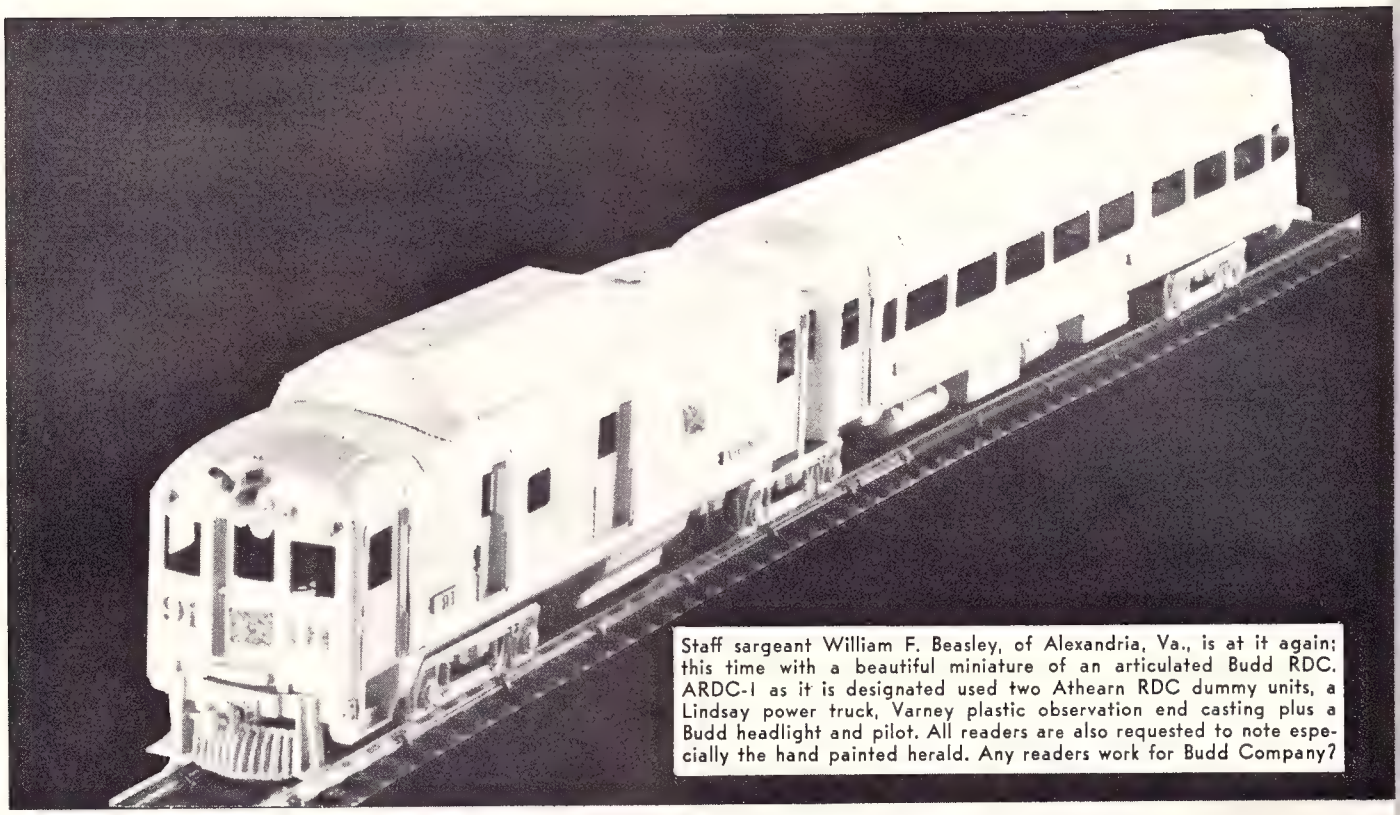


HO is HO and O is O and never the twain shall meet? But this photo is proof that they do at the club rooms of the New Bedford Engineering Society, New Bedford, Mass. Actually the tracks shown are test tracks, although the Society does operate layouts in both HO and O gauge, in addition to having additional test tracks in TT, OO, and S gauges. The odd perspective shot by member J. Dias, Jr., M.D.

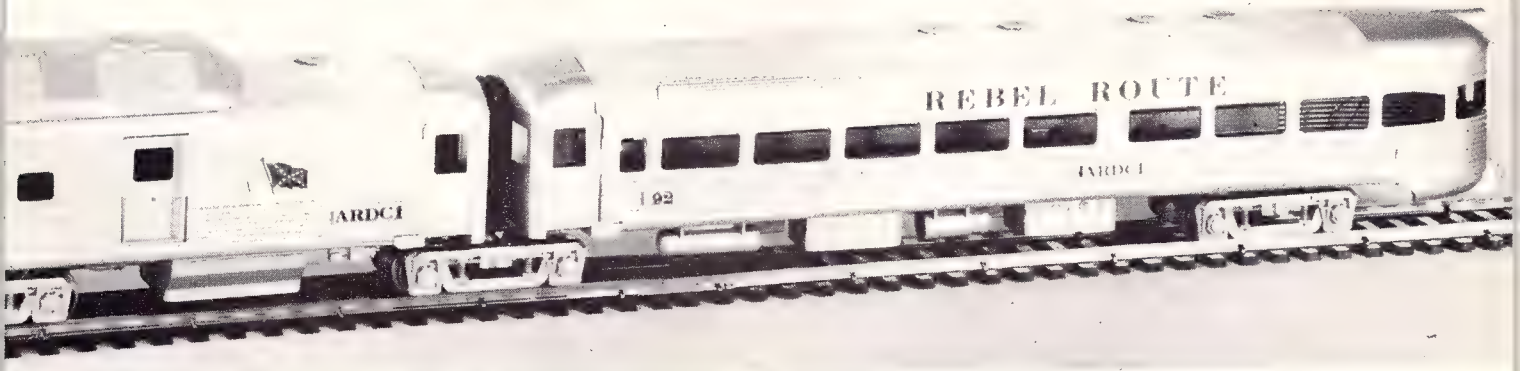
NABOR'S PIKE

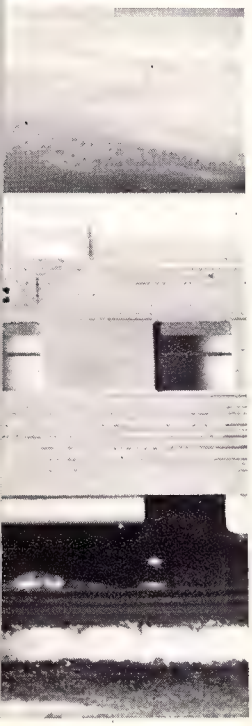
Let other readers see the results of your work. Send us pix of your railroad. Photos which illustrate good detailing and modeling are wanted for publication; a minimum of $5.00 for all photos used in this section. Send to Pix Editor, Railroad Model Craftsman, Ramsey, N.J.

Lloyd Giebner built this specially designed cutaway 1/4" scale dining car for the Santa Fe for use in advertising promotion. It's a model of a car used on the crack Santa Fe streamliner "Texas Chief."



Staff sargeant William F. Beasley, of Alexandria, Va., is at it again; this time with a beautiful miniature of an articulated Budd RDC. ARDC-1 as it is designated used two Athearn RDC dummy units, a Lindsay power truck, Varney plastic observation end casting plus a Budd headlight and pilot. All readers are also requested to note especially the hand painted herald. Any readers work for Budd Company?





Herbert W. Dosey, of Cleveland Heights, Ohio, built this 1/2" scale 2 3/8" line car for his Lake Erie & Southern Railway old time interurban line. The body is wood, truck frame brass with cast iron wheels. A Thomas switcher motor is used for power and Boston gears are used in the drive. Reversing is by means of a Walthers polarized relay. Herb uses O gauge rail which scales down to about 70 lb. rail. Color of the car is traction orange, and her 30:1 worm and 2:1 spur give her a realistic scale speed of 30 miles per hour, just about right.

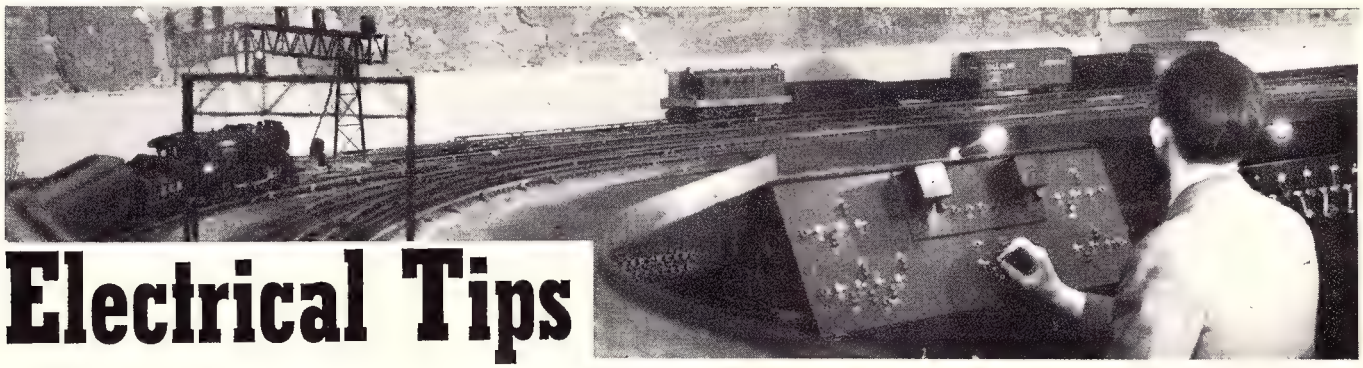
This giant pike measuring 12 ft. x 24 ft. is built on sheets of ½ inch plywood nailed to 1x4 and 2x4 framing, is completely portable.

Designed by David Ross and Ken Bingham, this layout features large gracious curves around which full length streamliners slither like Egyptian dancers. Structures are mostly kits.

Look at that forest! Almost 90% of this great layout is built up from commercial structures, kits, and materials. Layout has just about everything that a good layout should have: towns, yards, long main line, mountains, good running.

TORONTO METROPOLITAN MODEL RAILROAD CLUB

You'd never know that this giant model display was portable. Built by the Toronto MMRRC, it has already been shown at several exhibitions.



Electrical Tips

A good part of the time, the easiest way to do a job is often the simplest and best way. These proven hints will save you time, money and temper; and prove that electricity can be fun.

Rheostats

PASTE this in your hat. Rheostats for HO or TT gauge should be from 35 to 50 ohms resistance, for S gauge 25 to 30 ohms, and for O gauge about 20 ohms. HO or TT rheostats should have a capacity of 50 watts, while those for the larger gauges could well have 100 watts. 25 watt rheostats can be used for the smaller gauges if a quick acting magnetic circuit breaker (Walthers) is used to protect it from burnouts.

Feeder Wires

The average model railroad layout has comparatively short blocks so that voltage drop does not slow trains down at the far end as it does on toy layouts. However, do not hesitate to add extra feeders to a block if needed provided there is no switch (in 2-rail) in between sets of feeders. If there is an intervening switch, gaps will be required to avoid short circuits, depending on the exact layout. Some model rails "bond" their rail joints by soldering copper wire jumpers around the rail joiners, but these are necessary only on long blocks. Much better insurance can be had by using heavy wire— No. 16 or No. 14— for feeders to the remote parts of the pike, with No. 18 close to the power supply.

Simple Soldering

Wiring a model railroad is a good place to learn to solder since soldering copper wires together is about the easiest possible job on the railroad. Dab parts to be joined as well as the tip of the iron with flux, carry solder to the work on the tip of the iron so it is good and hot. Wire ends should first be twisted together for added strength. When solder has flowed into the joint, then cooled (which you can see with your eye), your job is done. If the solder you use does not flow off the iron but comes off like peanut butter, try switching to a 50-50 solder. Get coreless wire solder if possible, otherwise rosin core. Bar solder is difficult to melt off with the average electric iron but can be hacked off, melted down in a small ladle, then "cast" into ingots on corrugated cardboard.

Volts, Amps & Ohms

More stuff to paste in your hat (or toupee if you don't wear a hat) is: Volts = Amperes × Ohms; or, Ohms = Volts divided by Amperes; or Amperes = Volts divided by Ohms. Another formula you might have occasion to use is this: Watts = Amperes × Volts; hence, Amperes = Watts divided by Volts; and Volts = Watts divided by Amperes.

Block & Cab Control

Independent Block Control means that each electrical block on your railroad has a separate reverse switch and speed control and is independent of all other blocks (although sometimes for economy or convenience two or more blocks may be worked by the same controls). Cab control implies that there is one reverse switch and rheostat which can control *any* of the blocks on the model railroad. There may be several cabs eventually and one power supply for the whole railroad or one for each cab.

Variable Transformers

Much has been made of variable transformers (under various trade names) to plug in *ahead* of your DC power pack for super control. Actually all toy transformers, and many DC power packs now on the market contain a variable transformer instead of a conventional rheostat, so check yours, with the manufacturer if necessary, before investing in a fancy variable transformer.

Wire Screen Causes Shorts

A prime source of short circuits on new and even on old railroads is the wire screening used in scenic construction. A spike sticking through the roadbed will make contact with the rail and the screening making it all "live." Another spike at another site may be doing the same thing and may cause a continuous short or just one when the switch is turned or polarities of two blocks are opposed. A quick way to find these is to substitute a storage battery for your power pack, block out any circuit breakers, and turn on the current. The place where you see a smoke start to rise or feel the rails beginning to get warm is one of the spike contact sites. Better to keep screening well away from the rails.

Ammeter Tells What's Wrong

If you connect an ammeter in your circuit, be sure to do it *before* the DPDT reverse switch. The ammeter should have a fairly low range, from 0 to 3 or 0 to 5 amps being preferred, although those reading up to 15 or even 30 amps give you some indication of the power your trains are drawing. If the needle wants to read backwards, dropping off the scale instead of climbing up it, just reverse the connections on the meter. When the ammeter finger climbs up to the top of the dial and beyond, you have a short circuit. If it just climbs higher than it ordinarily does, some condition such as side-rod bind or gear bind is making your motor pull more power than it should.

Right Rails Positive

Standard practice is for your engines to run forward when the right-hand rail is positive, although if all your engines are the same and you seldom go visiting with them, this doesn't matter. All kit built engines are designed with the above standard in mind. Of course this applies only to direct current.

Wire Insulation

To keep insulation from fraying on the engine-tender hook-up wire with braided cover (as sold by Pittman), coat freshly cut end with airplane cement, rub in a little beeswax, or wrap tightly with thread.

Gapped Rail Insurance

Rail gaps for two-railing which get inadvertently closed can cause some real headaches until located and opened again. The best insurance against such closures is the use of insulted rail joiners which contain a piece of plastic to keep rail ends positively apart.

Improving Pickup

Where an engine picks up with the wheels of only one truck and returns with only the wheels of another erratic operation may obtain if either the wheels or track get dirty or the wheels are lifted off the track. While cleanliness would seem to be the answer, it is a better idea to tie the trucks of that engine in with the trucks of the next unit or car with two wires, thus doubling the number of wheels doing the picking-up and returning of current.

Soldering to Flexible Track

If you have to solder lead wires to flexible trackage, try to put them along the switch-free parts of the layout where the tie strip is made of nonmelting fibre. However if you do have to attach them to a part where the switches have plastic ties, try to use the special connectors supplied with the Atlas switches. If this is not possible and you must solder, insert a piece of flat fibre under the rail (removing a staple if necessary to get some space), and so soldering quickly with a very hot iron as high up on the rail as possible. File off any solder which would interfere with operation.

Simplified Terminal Wiring

For a complicated wiring set-up, try using screw type terminal strips for connecting wires. Terminals can be labelled or color coded with model railroad paint. A much neater job results than from simply splicing wires, and disconnecting any unit for replacement, tests, or changes

Turn the page to one of the most beautiful layout drawings you've ever seen, the soon to be constructed Central Pacific Railroad of California, the third complete rebuilding since 1929. It's to have its own building.

RECONSTRUCTING THE C. P. RR. of CAL.

by Ulrich B. Graff

THIS is no small layout. While designed in "O" gauge, by halving all dimensions it could be built in about a quarter of the space in "HO" gauge. The layout incorporates both a standard gauge Central Pacific of Cal., and narrow gauge Pacific Coast Railway.

This layout represents what is to be the third complete, and it is hoped ultimate, rebuild of the Central Pacific since 1929. In this case the layout was designed first, and a building will be erected to house it. In the hope that the C.P.R.R. of C's mistakes of the past and its layout-to-be may offer some ideas to the readers of Model Railroad Craftsman, I am presenting it. I have no intention of going into competition with the "Doc" and am sure I would come out a poor second if I did. If he feels inclined to "tear into" this layout, so much the better for all of us. I hope no reader will adopt the layout blind. Steal ideas from it as I did from the Montana Central (RMC, October 1954), but bear in mind that one man's ideal is seldom another's.

From past sad experience, tight trackage just does not lend itself to good scenery or smooth realistic operation. Sweeping spirals and generous turnout frogs featured in the layout are sure to make for smooth running. Standard gauge curves are an absolute minimum of 5' radius in the mountains to as much as 12' radius on the lower levels. Average radius is about 6' plus. Turnouts are number 6 frog minimum with 8's and 10's scattered here and there. The yards are designed with a number 6 lead. To a large extent, the narrow gauge main line follows the same standard reduced to its proportions.

My first layout, built at a time when no commercial locomotive could be expected to operate on a radius much under 6 feet, was quite simple, but did stick to a No. 6 minimum turnout. On my second layout, the biggest fault I have yet to find was that I yielded to temptation and put No. 4 switches in the yards. Carefully built, these operated fine 99% of the time. The 1% derailments invariably occurred in the presence of visitors, and then all at once. Just a bit too much speed, a car wheel with a blob of gunk on it — that was it. On the other extreme, I have a friend who laid a couple of No. 14 turnouts. Don't fall into that trap either. The gap at the frog gets out of all proportion due to the oversize dimensions of flangeways and rail. Trains crash over the outsize gap at best in mighty poor style. At worst, they just pile up. Stay between No. 6 and No. 10 or No. 12, and you'll keep out of trouble.

To keep things interesting, the Tamalpais branch of the narrow gauge has been laid out as tight and rugged as I dare. It will be restricted to a lone Shay (Kemtron) locomotive. Gravity cars may be made for it. With the exception that the prototype was standard gauge and the model will be narrow gauge, trackage retains many features of the original. The stations are properly named and occur in proper order. The Double Bow Knot with its 7% grade is there. Even the Mesa station water tank is correctly located.

Forget the idea that all narrow gauge railroads were "jerkwater" propositions. In their hey-day, many were class "A" operations. On the whole, mine will be one of these. Ever see the Owenyo branch of the S.P.?

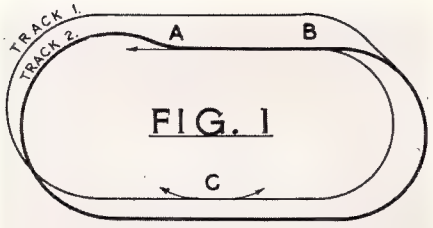


FIG. 1
LOWER LEVEL

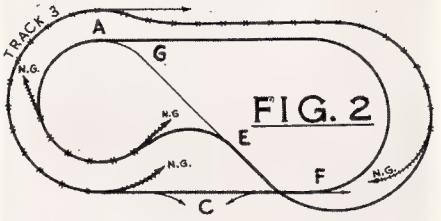


FIG. 2
UPPER LEVEL

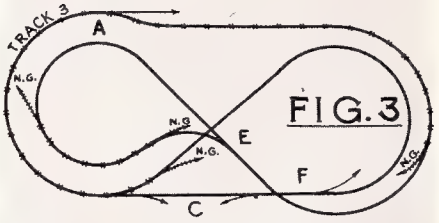


FIG. 3
REVERSING LOOPS

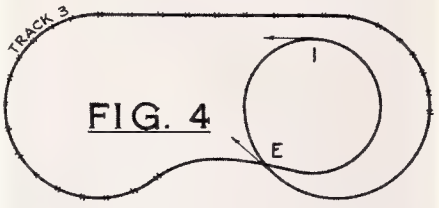


FIG. 4
NARROW GAUGE - SHORT RUN

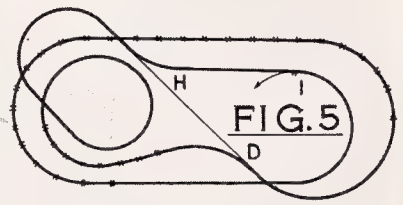


FIG. 5
NARROW GAUGE - LONG RUN

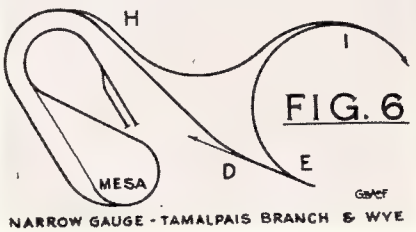
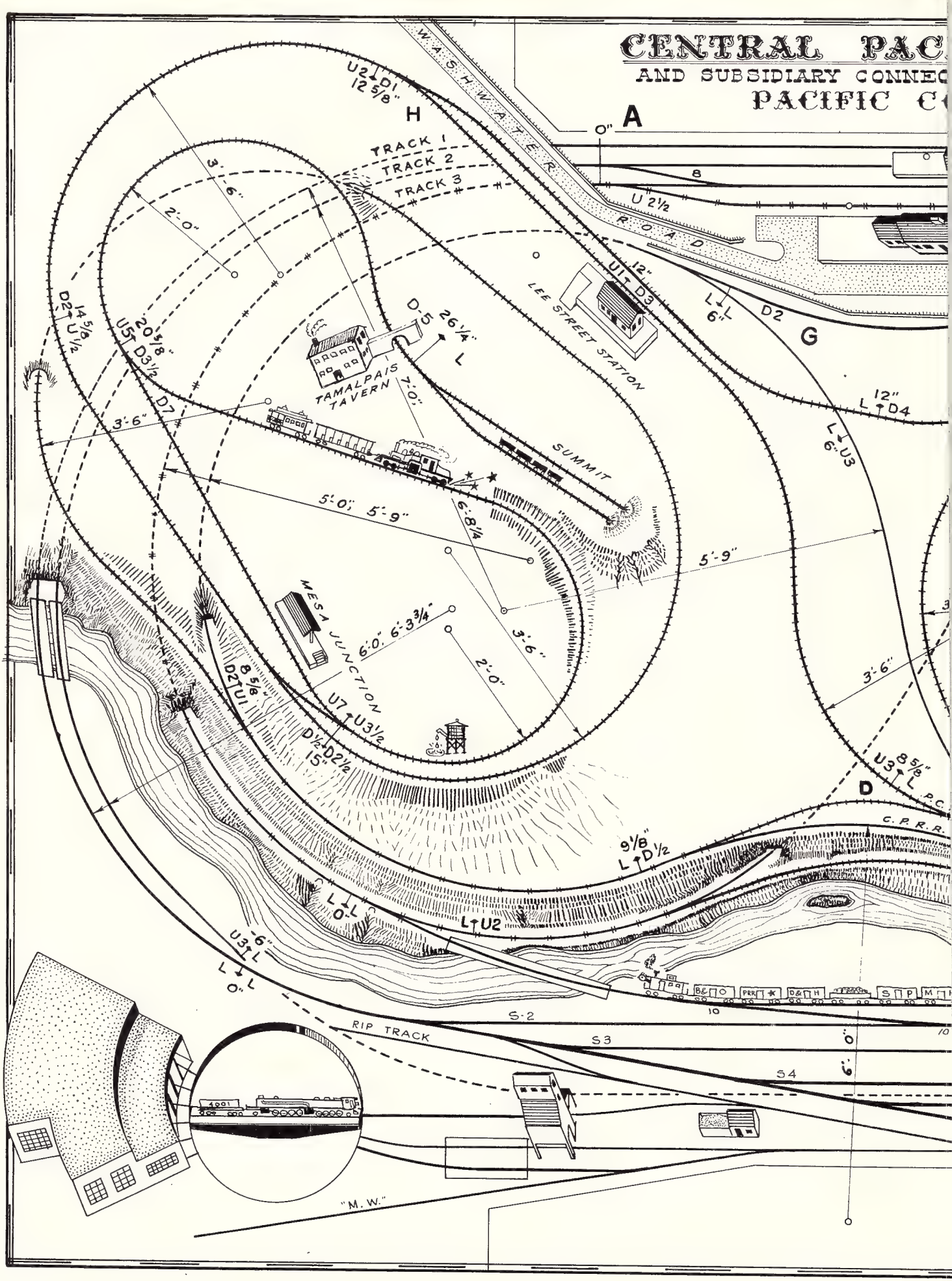
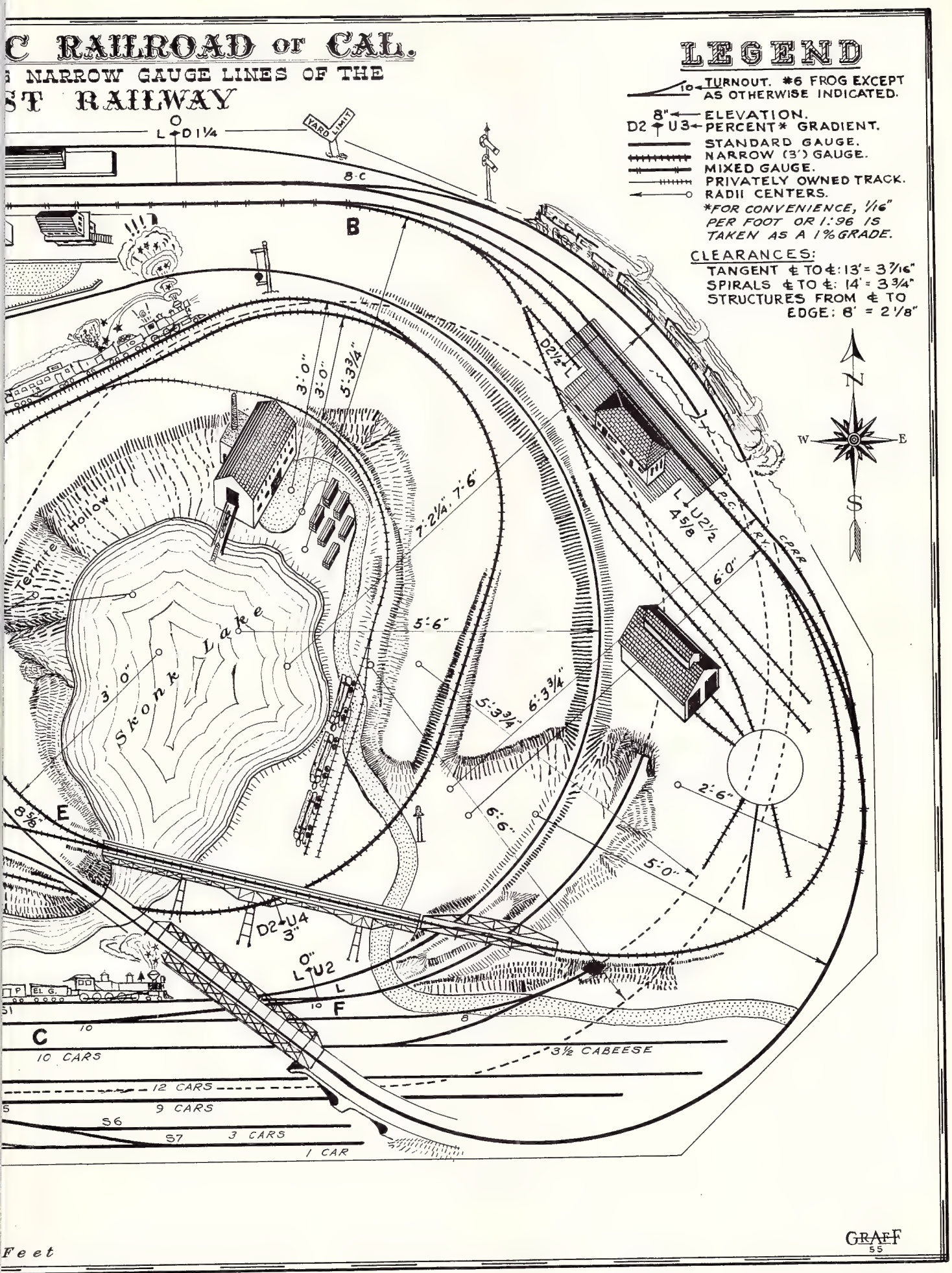


FIG. 6
NARROW GAUGE - TAMALPAIS BRANCH & WYE


CENTRAL PAC
AND SUBSIDIARY CONNEC
PACIFIC C
WASHWATER ROAD
A
H
G
D
TRACK 1
TRACK 2
TRACK 3
LEE STREET STATION
TAMALPAIS TAVERN
SUMMIT
MESA JUNCTION
RIP TRACK
"M. W."
C. P. R. R.
U2 D1 12 5/8"
U 2 1/2
U1 D3 12"
L 6" L D2
L 12" D4
L 6" U3
U3 8 5/8" L P.C.
D2 U1 8 5/8"
U7 U3 1/2
D 1/2 D2 1/2 15"
9 1/8" L D 1/2
L U2
L 0" L
U3 L 6"
L 0" L
D2 14 5/8" U 1/2
U5 D3 1/2 20 5/8"
D7
D5 26 1/4" L
3'-6"
2'-0"
5'-0"; 5'-9"
6'-8 1/4"
6'-0", 6'-3 3/4"
3'-6"
2'-0"
5'-9"
7'-0"
S-2
S3
S4
10
4001


C RAILROAD OF CAL.
NARROW GAUGE LINES OF THE
ST RAILWAY
LEGEND
10 ← TURNOUT. #6 FROG EXCEPT AS OTHERWISE INDICATED.
8" ← ELEVATION.
D2 ↑ U3 ← PERCENT* GRADIENT.
STANDARD GAUGE.
NARROW (3') GAUGE.
MIXED GAUGE.
PRIVATELY OWNED TRACK.
RADII CENTERS.
*FOR CONVENIENCE, 1/16" PER FOOT OR 1:96 IS TAKEN AS A 1% GRADE.
CLEARANCES:
TANGENT ℄ TO ℄: 13' = 3 7/16"
SPIRALS ℄ TO ℄: 14' = 3 3/4"
STRUCTURES FROM ℄ TO EDGE: 8' = 2 1/8"
N
W
E
S
L D1 1/4
YARD LIMIT
8-C
B
3'-0"
3'-0"
5'-3 3/4"
D2 1/2 L
L U2 1/2
4 5/8
P.C.L.R.R.
CPRR
7'-2 1/4", 7'-6"
6'-0"
5'-6"
Termite Hollow
Skonk Lake
3'-0"
5'-3 3/4", 6'-3 3/4"
6'-6"
2'-6"
5'-0"
8 5/8
E
D2 U4
3"
0"
L U2
L
10
F
8
C
10
10 CARS
3 1/2 CABEESE
12 CARS
9 CARS
S6
S7
3 CARS
1 CAR
P
El. G.
51
5
Feet
GRAFF
55

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C. P. RR. of CAL.

Equipment and cars are kept slick as a whistle. Why not? Trains operate only 6 hours a day, and to kill time if nothing else the other 18 hours are devoted to maintaining equipment. For the same reason the C.P.R.R. of Cal. was chosen as my prototype road. Old time or not, it maintained schedules, some of which were faster than today; it was in all respects a first rate operation. As an example, the S.P. Daylight makes it between San Jose and San Francisco in 65 minutes. C.P.R.R. made it in 60 minutes over a longer route. As a final payoff, South Pacific Coast, a narrow gauge line had a schedule which was competitive with the C.P.R.R.! Can't very well call that a "jerkwater" operation.

Part 2

Any layout which takes too long to get into operation is doomed. I expect to run my first train about 60 days after construction begins. When the layout is more or less complete it should handle 4 trains with practically no interference and permit minor yard work as well.

Figures 1 to 6 depict the basic layouts which were combined to form the complete system. By themselves, they show the operations better than any number of words. First rail to be laid will be "Track 2" (heavy portion of Fig. 1). At almost the same time "Track 1" will be nearing completion. Note that Track "1" and "2" form an inside out figure 8; however, by properly positioning the crossover at "B" a train can circle "Track 2" indefinitely. In effect it will "hold" a moving train. This permits use of "Track 1" as an extended yard lead at any time, and for as long a period as may be desired without tying up the railroad.

Next construction will be the yards to the South. Buildings and engine facilities are shown in very sketchy outline. Little is to be desired. Engine facilities have their own lead track, have ample room for construction, and are of the "straight thru" type, i.e., locomotives make all necessary stops for service on entering and leaving, and do so in rotation without being switched or turntabled from "hither to yon." Sooner or later I am going to make all stops automatic so that once a locomotive is turned loose on a lead track it will stop at each service point, wait, proceed to the next and finally position the turntable which will then turn the locomotive to the first vacant stall and release it. Sound rugged? Isn't at all! A little figuring may convince you. Some day I may do a short article on how to do it. Included in this area are tracks for wrecker storage, and a rip track. A 25 year old pike has use for one.

The freight yards have their own lead track, and in combination with the engine facilities lead, a run-around is provided. Tracks "S-4, 5, 6 and 7" will store 25 cars and 3 cabooses comfortably, with occasional facilities for an extra 10 cars on "Track S-3." To a large extent the yard has most of the advantages of a double ended yard.

At about this time the narrow gauge and upper level standard gauge can be started. About 50% of "Track 3" is dual gauge. If you have never dual gauged, you just ain't model railroaded yet. Anything can happen. Worst, sooner or later, it usually does! AND YOU CAN HAVE CORNFIELD MEETS — GOOD SOLID ONES — polarity control or not. (One wonders if camera fans throw $300 Leicas at one another? Ed.)

From this point it is difficult to predict construction other than to say that the road should be relatively complete in a two or three year period.

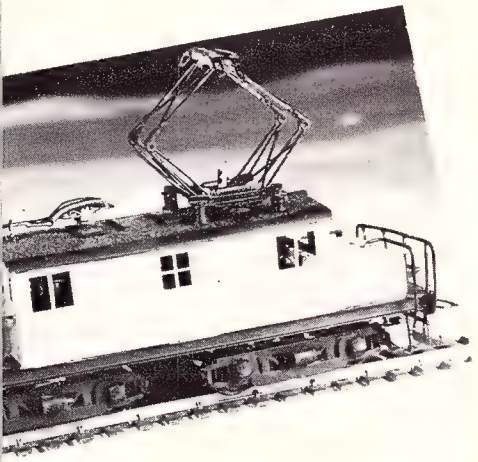
Interchange between upper and lower levels can be made in either direction at point "C." Again, trains can be kept on the upper level (Fig. 2) indefinitely without interference to Tracks "1" or "2" by proper switching at "A," "B" and "C."

Both standard and narrow gauge trains can be reversed in either direction, and from any direction of approach. Personally I consider a layout with no reversing loops superior to a layout with only one. When the last case is followed, one is forever getting a train reversed with no easy way to un-reverse it without backing. Backing a long train is not only time consuming, but long ones have a habit of going off the rails now and then; and anyhow, who ever heard of backing a freight or passenger over the major portion of a division? My thought is, put in no reversing loop, or put in two. If you want to reverse locomotives, OK, put in a Wye. It is much more realistic, and it also uses far less space.

I have another phobia. Return loops should not be a part of the main line run unless you operate 3 rail or catenary. A return loop can be made to polarize itself automatically, but 99% of model railroaders put in a polarity changing switch, and I predict you'll get mighty tired flipping that toggle back and forth before too many round trips. Nonetheless if you do occasionally like to operate point to point, you can—see fig. 3.

The narrow gauge system is depicted in Figures 4, 5 and 6. I think it is fairly straightforward. Although only one private branch spur to the Greene & Wharps Lumber Company has been shown, there is room for a lot more. Incidentally a narrow to standard gauge transfer trestle could be incorporated in the Northeast corner of the layout, and eventually probably will be. The standard gauge could also deliver coal to the narrow gauge in this vicinity.

Pile ups such as this on a model pike are a rarity but ordinary derailments are all too common. Most derailments are the result of bad track, dirt, or poorly maintained cars.



There's a good reason behind every derailment and most of them can be prevented with a bit of maintenance and care.

by Max Emory

derailments—why?

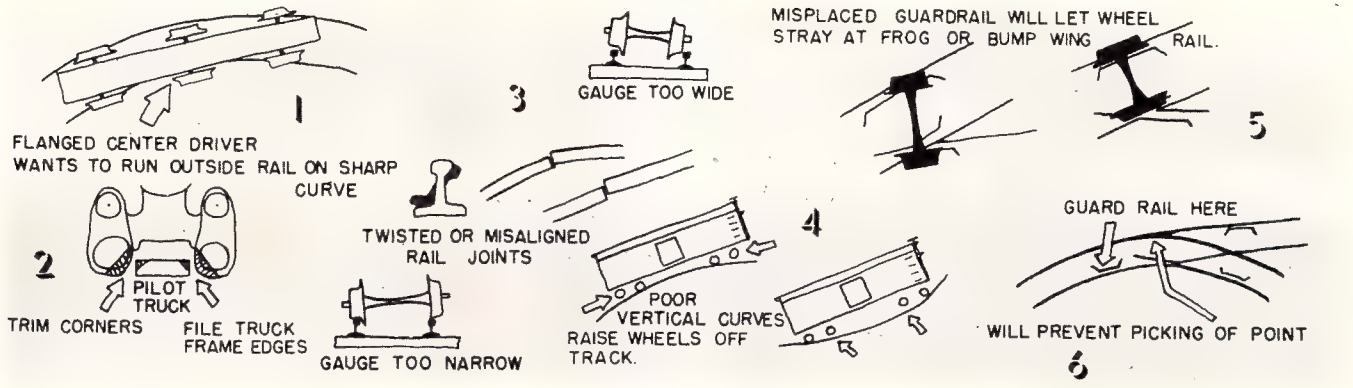
NUMBERLESS times the enjoyment of a model railroad is greatly lessened by derailments. Whether the trouble is in the car (or engine) or in the trackage itself can be determined thusly. If everything or nearly everything goes off at a given spot, it must be a defect in the track. If only one car or engine derails, the fault must lie in the car or engine. No derailment should ever be left unexplained if you want to get maximum enjoyment and minimum aggravation from your pike. Keep watching as the rerailed train passes the wreck site its next time around. You may actually *see* the wheels climb off the track in which case you have the problem half licked. You may, in fact see that the wheels are *already* off as they come to the wreck site, having been derailed at some part farther back down the line, which you will have to find.

The prime rule in finding the cause of a derailment is OBSERVE. Run the train or car or engine through at varying speeds and even in both directions and watch the wheels. It may be any one of the numerous causes to be listed, it may be something that has never happened before, at least in our experience.

Engines

(1) Derailment on a curve. When it seems that the driving wheels seem to lift right up it may be that flanged middle drivers on a six or eight coupled engine are being pinched by the curve, fig. 1. One solution is to widen the gauge on the curve just a little, but not too much, or cars will drop down between the rails. A better answer is to remove the flanges from the center drivers as many but not all manufacturers do. You just cannot expect a pacific with all flanged drivers or a mikado with all flanged drivers to take an 18" radius curve in HO (How Marklin does this with a 2-10-0 is a neat trick which is a bit difficult for any but a machinist to duplicate with American kits). If the drivers are sprung as with Varney super and pre-war locos or Wintons, removal of flanges may not be feasible since then the wheels will drop down behind the rail on the curves and stay there. Binding of six wheel trucks on diesels or passenger cars is also possible on curves for the same reason, but usually is negated by a motor, gearbox, or underbody which keeps truck from swinging so far and in itself limits the curves.

(2) Pilot truck derailment. This is such a serious problem to solve and keep solved that one large O gauge exhibit at the New York World's Fair kept lead and trailing trucks raised up off the rails permanently so they could not foul up the show. Manufacturers have various methods of springing, all of which work most of the time. But too sharp a curve will pull the lead truck over too far for the slot in it and there she goes off the track. Seemingly you could file the slot a little longer, and maybe you can, but then you may have interference by the pilot wheels with the cylinders and need to file them away a bit on the inside. Prototype pilot and trailing trucks actually bear some of the weight of the engine and lead it into curves, whereas models really just go along for the ride. Some weight-bearing may be given model four wheel lead trucks by replacing the coil spring often used with a piece of tubing just long enough to keep truck from flipping up and off the track. Pilot trucks can be derailed by such things as out of gauge wheels or a tiny speck of nylon left at one spot on the circumference. Be sure that pilot wheels turn freely. Trimming cylinders and truck frame will let 4-wheel lead truck swing more.



(3) Trailing truck derails when backing up. Some springing is built into trailing trucks on kits, but plenty of weight also helps. Some limiting device such as the tubing around the central mounting pivot as mentioned for lead trucks would help. Usually these trailing truck derailments will be greatly reduced by backing up at slow speed, as real engines do. Engines which have to back up a lot such as switchers do *not* have trailing trucks, or lead trucks either for that matter.

(4) Other causes would include eccentric or wobbly wheels. An engine with an eccentric driver will be almost impossible to run at any speed, while a wobbly wheel will wobble the whole engine if it is not bad enough to derail it. Eccentric drivers should be replaced, but wobbly ones if not really loose may often be tapped with a light hammer to get parallel to their mates. However this is usually a temporary repair since the pull of the rods which helped make them wobbly to begin with will get them that way again. So replacement may be needed here. Eccentric truck wheels usually do not matter and wobbly ones will stay straightened.

Wobbly engines are not always caused by this, however. Locos with sprung drivers may wobble if the springs are too weak. This is true of pre-war Varney engines and the Winton berkshire. The remedy most easily effected with these is not adding weight, but unspringing the engines. With the Winton this requires filling in the slots left in the retainer plate for the axles to drop down.

It is a truth which many model rails eventually discover, that each engine must be tailored to the layout it will run on. Aside from a four wheel switcher, there are few engines which will run on any layout without some adjustments. Similarly the layout must be tailored to the engines that will run on it with a slight curve adjustment here, an extra guard rail there, and a smoothing of a vertical curve (top or bottom of hill) somewhere else.

Cars

(1) Lack of weight is really a symptom of something else wrong with a car (unless you put a plastic flat car at the front of a long train), but it is true that the heavier a car, the better it will stay on the iron. If your cars are plastic you can cement or screw slugs of type-metal or lead or even rolls of solder to the car to add weight, although another interesting way of getting it on open top cars is to add a dummy load. I once had a hopper car *full* of real coal which would roll through the roughest track.

(2) Couplers are a frequent cause of derailment. If your train is trying to round a curve that is too sharp for it, the couplers if they do not come apart will flick cars off the track. Pushing cars around by hand in pairs will usually show you this fault. If the curve cannot be eased, perhaps you can change to Talgo trucks which have coupler pockets that swing with the trucks, or use passenger couplers.

(3) Kingpins are the screws which hold the trucks to the car. If they are at an angle, odd derailments will result. If they are too tight the trucks will not pivot freely and may have a pair of wheels lifted off the rail (ripe for dropping off that rail) on uneven track. If they are too loose the car will list, which will in turn have an effect on the next car via the couplers.

(4) Eccentric wheels usually do not have to be replaced if they are really eccentric since they give a realistic jounce to the car which you often see on a real freight train and feel on a passenger train. A wobbly or canted wheel can usually be straightened with pliers.

(5) Dirt is a great enemy of trucks, since wheels will in time pick up a coating of dirt as they run over your system. Plastic wheels pick up dirt more than metal wheels and the only way to prevent it is to keep a track-cleaning car constantly in use as some fellows do. At frequent intervals check the wheel treads of your cars and get the gunk off with a light file or with a solvent such as carbon tetrachloride or lacquer thinner applied with a pipe cleaner. I have seen wheels with as much as 1/32" of dirt in an irregular layer on them, giving horrible tracking qualities to the car.

Track

(1) In level straight or even curved track the chief cause of derailment is a poor railjoint. Sometimes one rail will be twisted for some reason, and joints on curves may not have the curve continued right through the joint. See fig. 3. Of course too wide or too narrow a gauge will derail a train, but this seldom occurs when any of the modern types of track are used. If you are using any of the new section "tinplate" HO tracks, you will have to realize that there are four times as many rail joints as with 3 ft. length rails and additional care must be exercised.

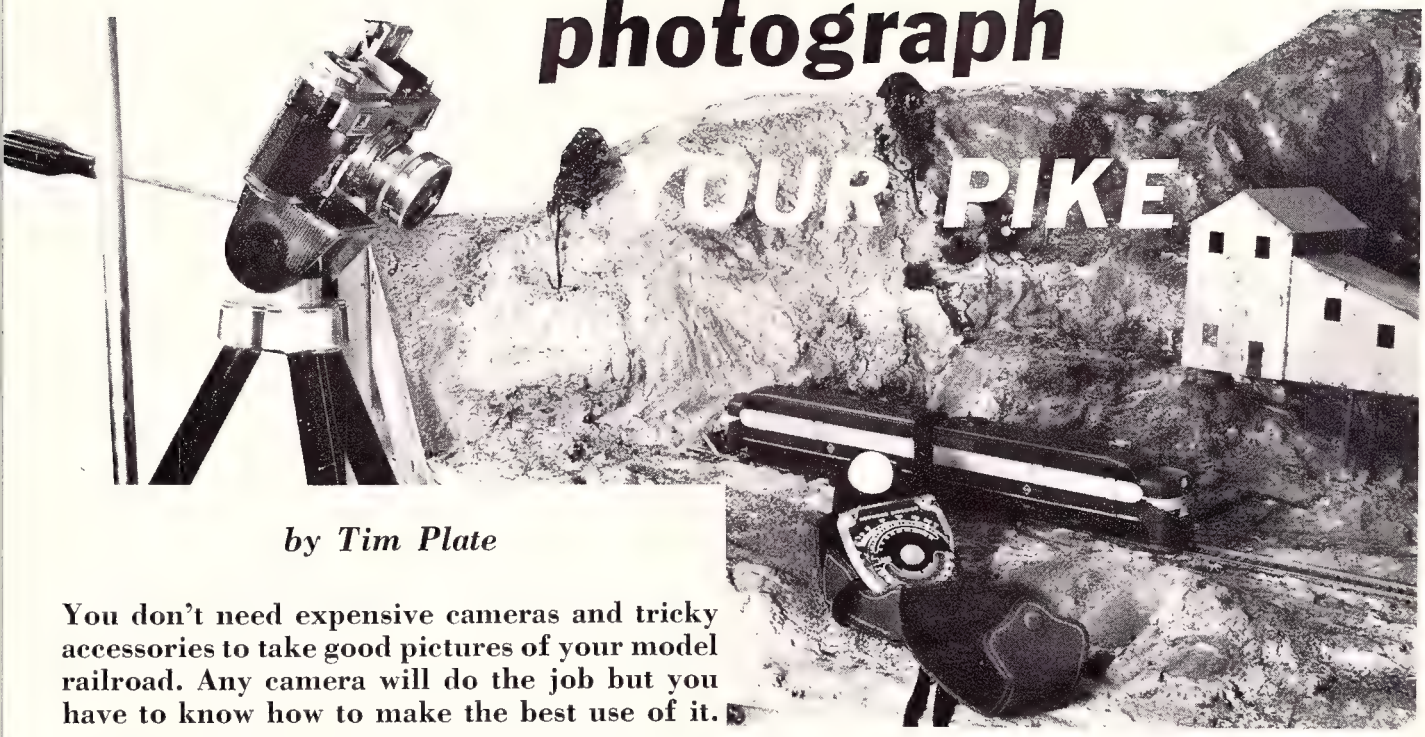
(2) Changes in grade are often derailment causes. You can easily picture a cowcatcher snagging on a sharply rising track, but it is also possible for a long wheelbase engine to rock on a sharp downgrade, or stretch across a sharp upgrade. Similarly sharp changes in grade may have cars riding for a moment on their two end or two center sets of wheels only, ripe for derailment. Very vicious derailment causes are places where the grade changes in an otherwise ticklish spot as on a reverse curve, in the midst of a nest of switches. Where space permits, the last 1/4" of rise or fall should be stretched out to double its "correct" length. See fig. 4.

(3) Switches are probably the most prevalent cause of model railroad derailments. Even with commercially made switches, you may not get perfect operation without a lot of work, although it is a lot less work than with home-made switches. As a train passes over a switch there are bounces at the two rail joiners where the switch joins the next piece of track, then a bounce at the point, another at the heel of the point, a bad one at the frog, and then two more where the switch is connected to the next piece of track — seven in all. The points often do not nestle snugly against the stock (outside) rails when electric switch machines get a little out of adjustment, and a derailment will result sooner or later. The jar at the frog may be lessened by filling the flangeways up with plastic wood then rutting it out with a truck wheel. There is more chance at a switch for the track to get out of gauge, so this should be checked if there is any suspicion of the width of the track here. Extra spikes and even spikes soldered to the rail will help keep a switch in gauge.

(4) Guard rails are part of a switch or crossing and should be so located that they do not pinch the wheels up off the track. But they should not let the wheel stray down the wrong path, either. See fig. 5. Guard rails may be placed anywhere that there is a tendency for cars or engines to go off, I have even put them around both rails of a sharp trolley loop. When wheels tend to "pick" the point of a switch and derail, a short guard rail placed ahead of the points will deflect the wheel away from the point, as in fig. 6.

(5) A gap in the rail is more likely to cause just a bump than a derailment, unless the rails get out of line. They should be held down with extra spikes to keep them in line. A plastic rail joiner is almost a necessity.

photograph OUR PIKE



by Tim Plate

You don't need expensive cameras and tricky accessories to take good pictures of your model railroad. Any camera will do the job but you have to know how to make the best use of it.

WELL, it's pretty hard to carry a railroad around with you to show your friends, unless you've one of those little midget things like Bob Bast was bragging over last year in Chicago, which had an inside radius about the size of a silver dollar. So Bob's pike might be just as wide as most HO pikes but it certainly wasn't as long. And any model railroad, especially the larger O and S gauge pikes, are just impossible to carry around without plenty of dismantling.

Yet we all like to show off our pikes to friends and other model rails and if we can't show 'em the real thing, maybe we can show them some good pictures. And certainly, anybody who can build himself a top notch model railroad can also take himself some good pictures and he doesn't need a $300 camera to do it either. Even a box camera will do a creditable job if you know how to get the most out of that camera. Like anything else, you have to learn how to take pictures and it doesn't come without a bit of practice.

You can take all types of pictures of a model railroad. Most of us just aim our camera at the scene, if we have a flash unit, and click away, hoping for the best. If our equipment is ordinary, we'll find that some of the picture is good but that everything in the foreground closer than six feet is white on the picture and not very sharp. Everything that is more than ten feet away is probably dark. Pictures of pet equipment are always too small in view, or else are fuzzy when taken too close. We'll cover these problems later, but first let's look over some of the different type cameras available to the hobbyist who wants to take pictures of his model railroad.

Types of Cameras

There are lots of different cameras but essentially they are all the same. Every camera is basically a light tight box which lets in a restricted and controlled amount of light; this light falling upon a piece of light sensitive photographic film. Simple, and therefore cheaper, cameras don't have elaborate controls or expensive construction. Such cameras are used mainly for snapshots and for this purpose they are more than adequate. These cameras, which cost less than $25 can be used to take good model railroad pictures and we'll tell how later.

Reflex cameras are very popular today and a good one will cost at least $50 and on up to well over $200. The reflex camera actually has two lenses, one used for taking the picture and the second one used for viewing the scene as you take it. For most normal work these cameras are excellent but when used in closeup model railroad photography, the separate viewing lens causes a condition known as parallax, meaning that the viewing lens doesn't show you exactly what the picture taking lens is actually taking. This can cause you to chop the top off of your locomotive or cars. Probably the best known reflex camera is the famed Rollei which comes in two models, both of which are excellent.

35mm cameras are once again enjoying a tremendous increase in popularity, largely because they are so good for color. These miniature cameras cost as much as $500 each. There are many different kinds of 35mm cameras and you can get some pretty good models for less than $100. Most advanced camera fans prefer the kind that have changeable lenses. Some 35mm cameras let you see exactly what you are taking and these are called single lens reflex cameras. Both Leica and Contax offer adapters which let you see exactly what you are taking. 35mm is best for color. 35mm black and white film requires great care in processing and unless you can control every step of the development, prints become very grainy, often flat, and are frequently marred by scratches, dust, and other specks.

Folding cameras still retain much of their popularity and as a rule can be considered as a good camera but not of professional calibre. They often have top quality shutter and lens combinations, if you care to spend that much.

Press type cameras are admired by many photographers and they are extremely versatile and are capable of producing top quality model railroad pictures. Press type cameras invariably come equipped with ground glass focusing, so that it is possible to compose the model scene on the ground glass before taking the picture. In this way you can be sure that everything that you want in the picture will actually be the way that you see it. Conversely, anything that you might want removed from the scene can be taken out beforehand.

View cameras are much like press cameras in appearance but are meant primarily for indoor or restricted outdoor use. These are the very best type of camera for model photography since they come equipped (generally) with various supplementary controls such as swings and tilts which permit every part of the picture to be brought into critical focus.

Black and White or Color?

Color film is considerably more expensive than black and white film, so

much so that unless you have a 35mm camera, it would be best to forget it for the present. The color slides which are made by the 35mm camera are best shown in a slide projector and show the scenes in all of their original color. Kodachrome film is normally processed by Kodak although it is now sold for consumer processing. All other color films are sold without processing included and must be taken or sent to special color labs for processing.

Black and white film normally has a much faster speed than color film, is cheaper, and offers no problems such as come up in color photography where the color balance of the lights may be off, creating odd effects in the finished color picture.

Black and white is easily processed at home or by any photo finisher. Most finishers now offer jumbo prints (small enlargements) for about one cent more per print than contact prints.

You'll Need Lights

Flash can be used to take model railroad pictures but the results unless handled with great care are usually poor. The best way for the average person to photograph his layout is with photoflood lights mounted in bowl shaped reflectors. Using fast panchromatic film, you can stop your camera down all the way (f:32) at ½ second, when you use two No. 2 photofloods at a distance of about four feet from the scene being photographed. The reflectors can be purchased in any camera shop, frequently in the same shop where you get your model supplies. The kind with the rubber covered clamps are cheapest and very good for occasional use.

You don't need a light meter when you use photofloods, although you might have to experiment with the first roll of film to determine the correct exposure. Once you know the exposure, it will never vary enough that you need worry about lens openings and shutter speed. Remember, though, that the lights should always remain at about the same distance to the subject although you can move the camera. It's the light-subject distance that determines exposure, not the camera-subject distance.

Portrait Lenses

If your camera is a cheap one, you'll find that you can't get closer than six feet from your subject or your picture will become fuzzy. Most camera shops sell cheap supplementary lenses, often called portrait lenses, that permit you to come within two or three feet of the subject. If you care to experiment, the chances are that you have old magnifying lenses or even old spectacles lying around the house. Clean the lens carefully and tape it to the front of your camera. Now set a yardstick in front of the camera, with the end right up to the base of the lens. Take the picture and see if any part of the yardstick is in focus. If you can read the 20" mark, you'll know that by placing your cars and engines 20" away from the lens, that you'll have your picture in sharp focus. Easy? Sure it is. And you can do it with even an old box camera.

If you can stop your lens down (let in less light), you'll find that the area of sharpness will increase. Maybe only a two inch wide area will be in focus when you use a supplementary lens that is sharp at 20". By stopping down, your area of sharpness may increase so that everything from 15" to 30" will be sharp.

Anchor the Camera

If you can, mount your camera on a tripod when you take pictures with a long exposure. If you don't have a tripod, set the camera down on a firm table so that it lies flat. Even the slightest vibration can cause unsharp and fuzzy pictures when you take time exposures. Even the best equipment is affected by vibration. Railroad Model Craftsman's staff photographer had to move his studio out of the editorial offices because the vibration of trailer trucks passing on the highway ruined so many pictures. Imagine what those vibrations are doing to our highways?

Where possible, use a cable release to trip your shutter. Oftentimes, a heavy hand on the shutter will jar the camera enough to cause the camera to wiggle causing another bad photo.

Adjusting the Lights

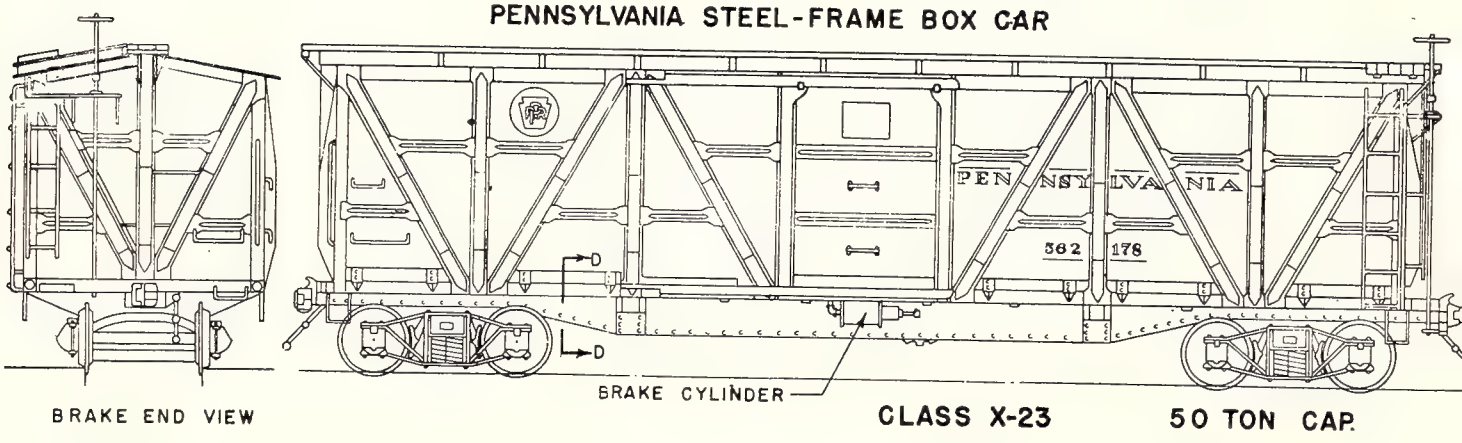
Probably the most important thing is your lighting. Try to have one light mounted close to your camera, using your second light at a 45° angle to the first light. The actual setup will vary with almost every picture. Sometimes you'll want to use a light in back of your model but never let the light rays shine into the camera lens. When you want to show texture, let the light skim over your model, much as the sun skims over the earth in the few minutes before sunset. With practice, you'll be able to shine your light anywhere that you want it.

What Is a Good Picture?

The editors get hundreds of pictures in the mail every month and are able to use only a small percentage of them, even though the models and railroads shown are often of top notch construction. Pictures submitted to Railroad Model Craftsman, and any of the other model magazines, too, should first of all show something that is of general interest. A picture taken of a standard 100% kit built All-Nation pacific will look swell in your scrapbook but stands about as much chance of being printed in this magazine as a picture of Marilyn Monroe. But convert that All-Nation pacific into a mikado and the picture will receive serious consideration (Yeh, and get me a picture of Marilyn Monroe doing the building and we'll use it on the cover. Ed.).

Not only must the picture show something of interest to as many readers as possible but it must also be of good technical quality. Photos which are fuzzy or out of focus cannot be used. Similarly, if a photo is grayish or dark, it can't be used. Frequently flash pictures are too light in the foreground and dark in the background. Another frequent fault is that the subject matter is too small in the picture, or has been chopped in taking the picture.

Distractions in the picture might also be a cause for rejecting a print. A fuzzy tree that hides part of an otherwise sharp locomotive photo can be annoying, just as is a picture that shows a sharp locomotive front with a fuzzy background.



SWITCH MACHINE & VARIABLE TRANSFORMER DIRECTORY

RAILROAD MODEL CRAFTSMAN

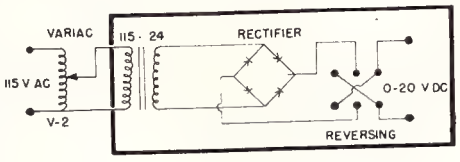
TO THE READER: This directory lists all known domestic variable transformers and switch control devices presently in manufacture, and which have found satisfactory use in the model railroad field. Never operate Direct Current motors on alternating current, since the pulsations will quickly cause the DC motor to burn out. All transformers listed bear the Underwriters Laboratory seal and are perfectly safe to operate for the purposes for which they were manufactured. Needless to say, they should not be tampered with and should be repaired only by a competent electrician. We strongly recommend the use of a circuit breaker on every transformer and, if possible, the use of a "red" ON light.

This Directory was compiled by the editors of Railroad Model Craftsman who relied upon the material submitted by the manufacturers of the equipment listed. All data is as of May 15, 1955. All manufacturers were invited to submit material for free listing, as another service to our readers. Railroad Model Craftsman can assume no responsibility as to the correctness or completeness of this Directory. Further information may be obtained by writing directly to the manufacturer or distributor listed, or by visiting your favorite model railroad hobby shop.

VARIABLE TRANSFORMERS

ABOUT VARIABLE TRANSFORMERS

Adjustable transformers have had a spurt of popularity recently among those with a little electronic know-how, those with a little extra money to spend, and those who want smoother control of their model trains. The term "Variac" has been used loosely for all variable transformers, but is actually a trade name of one make, just as "Kodak" is one make of camera.



An adjustable transformer has a voltage range of from 0 to 115 volts A.C., and will even deliver slightly stepped up voltage, from 130-135 volts. A variable transformer should never be connected directly to your model railroad track. Your power pack for D.C. operation, or another transformer for A.C. operation should be plugged in to the adjustable transformer, which then takes on the role of a speed controller. For independent block control, where there is usually one reverse switch and rheostat per block (in D.C.), you would need one adjustable transformer per block, which would be expensive. For cab control, variable transformers are excellent, since most cab control systems have one reverse switch and speed control and one power pack which can be connected to any of the blocks on the railroad. You can then have one variable transformer per cab.

The electrical hookup for D.C. operation is shown in fig. 1, based on a diagram furnished by the General Radio Company. You probably already have the power pack. Fig. 2 shows the adjustable transformer hooked up to any fixed step down transformer. There is little to be gained in putting an adjustable transformer ahead of a regular toy train transformer, except of the cheapest make, since most of these already have built into them a rigging very similar to the expensive adjustable transformers, giving a continuous (non-stepped) flow of power from lowest to highest voltage. Many model railroaders use a toy train transformer with its continually variable feature, in conjunction with a separate rectifier and reverse control switch, to operate scale model D.C. trains.

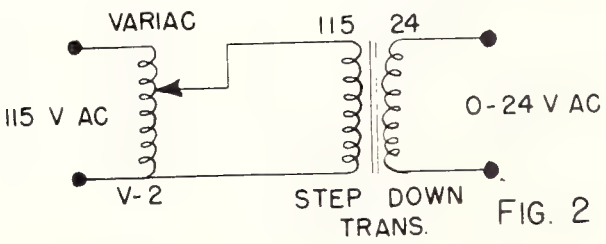
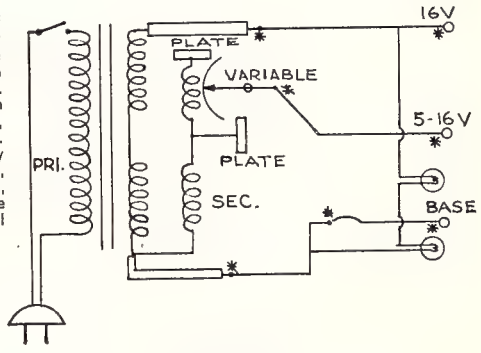


FIG. 2



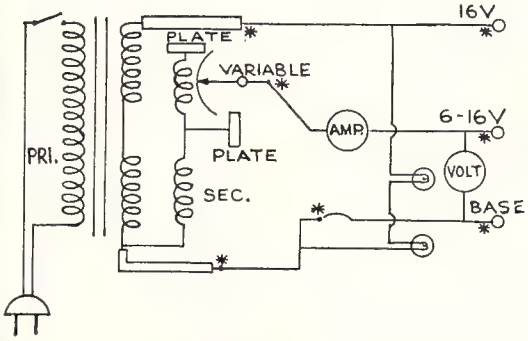
WIRING
* SOLDER

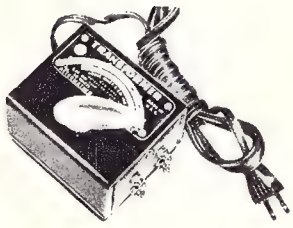
AMERICAN FLYER MODEL 15B

110 watt, 5-16 v. variable, 16v. fixed voltage. Pilot light indicates "on" and "short circuit." Circuit breaker. Price $16.50, mfd. by A. C. Gilbert.

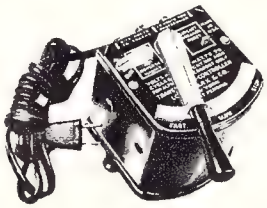
SWITCH MACHINE & VARIABLE TRANSFORMER DIRECTORY

AMERICAN FLYER MODEL 16B
190 watt, 5-16v. variable, 16v. fixed voltage. Pilot lights indicate "on" and "short." Circuit breaker. Price $19.95, mfd. by A. C. Gilbert.



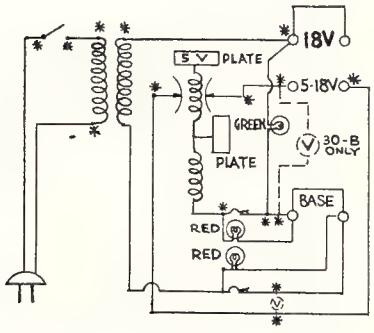


MARX TYPE 1549
70 watt, circuit breaker, reset button, variable and fixed posts. Price $10.00, mfd. by Louis Marx.



WIRING
*** SOLDER**

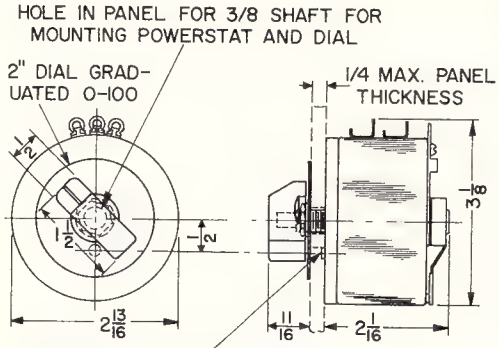
AMERICAN FLYER MODEL 19B
300 watt, 6-16v. variable, 16v. fixed voltage, pilot lights indicate "on" and "short." Built in ammeter, voltmeter, circuit breaker. Price $29.50, mfd. by A. C. Gilbert.



WIRING DIAGRAM
* SOLDER

MARX TYPE 1409
75 watt, circuit breaker, reverse control lever, variable and fixed voltage. Price $12.50, mfd. by Louis Marx.

MARX TYPE 1859
150 watt, circuit breaker, variable and fixed posts. Price $15.00, mfd. by Louis Marx & Co., 200 Fifth Ave., New York, N. Y.

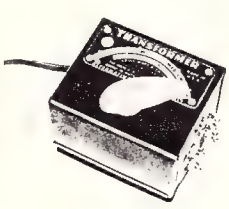


1/16 HIGH PROJECTION FOR KEYING POWERSTAT TO PANEL. REQUIRES 3/16 DIAMETER HOLE.

SINGLE UNITS

AMERICAN FLYER MODEL 18B
190 watt, two variable transformers in one case, plus fixed voltage. 5-18v. variable voltage from two sources and 18v. fixed. Green pilot light indicates "on," two red lights indicate short in either line. Circuit breaker. Price $26.50, mfd. by A. C. Gilbert.

AMERICAN FLYER MODEL 30B
300 watt, two variable transformers in one case. 5-18v. variable voltage from two sources, plus 18v. fixed. Green light indicates "on," red lights indicate short in either line. Built in voltmeter, circuit breaker. Price $34.95, mfd. by A. C. Gilbert Co., New Haven 6, Conn.

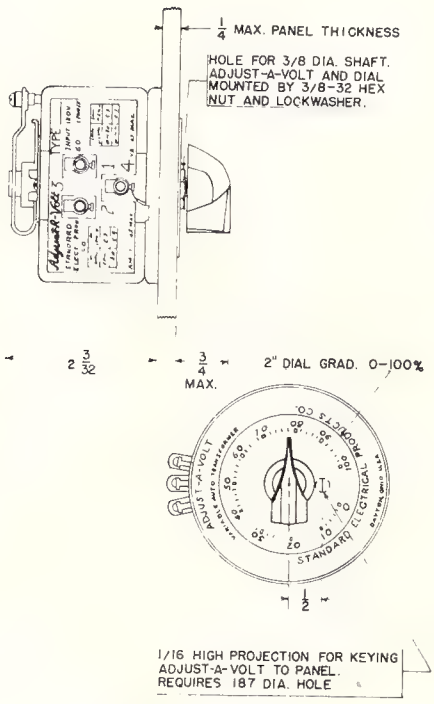


MARX TYPE 1249
45 watt, circuit breaker, reset button, variable and fixed posts. Price $7.50, mfd. by Louis Marx.

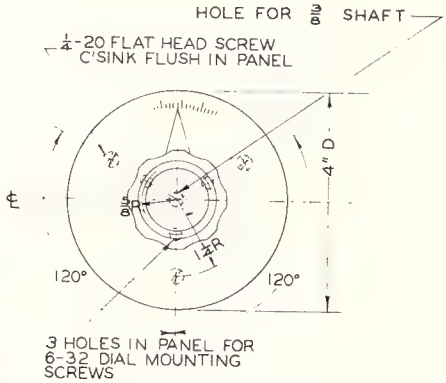
POWERSTAT TYPE 10
1.25 amps. output. 1/4" maximum panel board thickness. Requires 3/16" diam. hole in panel. 2" dial graduated 0-100. Price $8.50, mfd. by Superior Electric Co.

POWERSTAT TYPE 20
3.0 amps. output. 1/2" maximum panel board thickness. About 3 3/4" in diam. Price $12.50, mfd. by Superior Electric Co., Bristol, Conn.

VARIAC TYPE V-2
2 amp. capacity. 3 1/2" diam. Has 3/8" diam. shaft, 1/4" maximum panel thickness. Price $12.50 from factory or branch offices, mfd. by General Radio Co., 275 Massachusetts Ave., Cambridge, Mass.

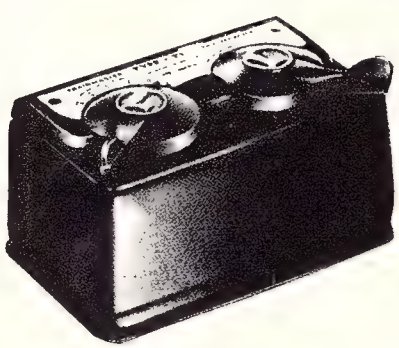

1/4 MAX. PANEL THICKNESS
HOLE FOR 3/8 DIA. SHAFT. ADJUST-A-VOLT AND DIAL MOUNTED BY 3/8-32 HEX NUT AND LOCKWASHER.
2 3/32
3/4 MAX.
2" DIAL GRAD. 0-100%
1/2
1/16 HIGH PROJECTION FOR KEYING ADJUST-A-VOLT TO PANEL. REQUIRES 187 DIA. HOLE

ADJUST-A-VOLT TYPE 100BU
1.25 amps. output. Price $8.50 1/4" maximum panelboard thickness. Mfd. by Standard Electrical Products Co.



ADJUST-A-VOLT TYPE 300BU
3.0 amps. output. 1/2" max. panelboard thickness. Measures about 3 3/4" in diam. and depth. Price $12.50, mfd. by Standard Electrical Products Co., Dayton, Ohio.

LIONEL TYPE LW
125 watt, reverse and whistle, 6 to 20 volts variable voltage range, plus 14v. and 18v. fixed voltage posts. Price not available at press time, mfd. by Lionel Corp.



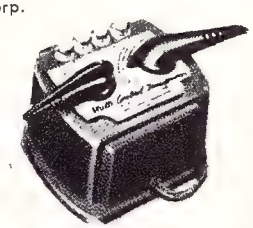
LIONEL TYPE TW
175 watt, reverse and whistle switches, twin controls. Variable voltage plus 14v., 18v., and 25v. posts. Circuit breaker. Price $16.95, mfd. by Lionel Corp.

LIONEL TYPE RW

110 watt, one variable voltage, plus 9v., 10v., 15v., and 19v. fixed. Circuit breaker, price $13.95, mfd. by Lionel Corp.

LIONEL TYPE ZW

275 watt, reverse and whistle. Two variable voltages, plus two fixed voltages which are actually variable but have less convenient handle. Price $29.95, mfd. by Lionel Corp.



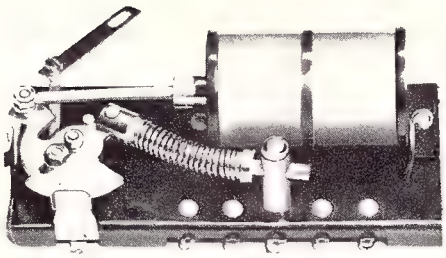
LIONEL, NUMBERED TYPES

Model 1032M 75 watt. Model 1033 90 watt. Model 1232 75 watt. One variable voltage plus fixed voltages, reverse and whistle control. Model 1032M is designed for 50 cycle rather than 60 cycle used by all other transformers in this listing. Built in circuit breaker. Mfd. by Lionel Corp., 15 E. 26th St., New York City, N. Y.

ELECTRICAL SWITCH MACHINES

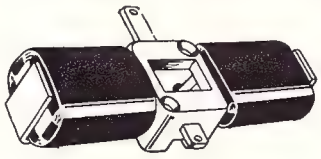
ABOUT SWITCH MACHINES

Most fans prefer to use electric switch machines to control their switches, especially those which are some distance from the control panel. Most switch machines work on the solenoid principle in which a momentary spurt of electricity activates one of two solenoids. Depending on which way the switch is thrown, a mechanical linkage then changes the direction of the switch by moving the switch points. Some switch machines utilize only one solenoid. There are also other systems which include a mechanical "choke control" system, compressed air, and hand operated switch throws. All have some measure of popularity.



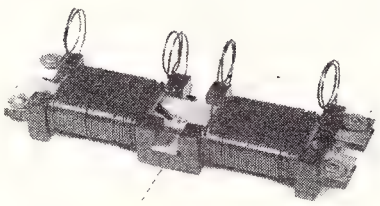
KEMTRON SWITCH MACHINE

Round twin solenoid switch machine. Suitable for any gauge, best suited for top mounting. Auxiliary contacts for indicator lights or power jumpers. All wiring can be done to the six soldering lugs which stick out from the front of the bakelite base of the machine. Throw can be varied. Positive action. Price $2.00, mfd. by Kemtron Products Co., 750 Fulton Street, Fresno, California.



WALTHERS TS-5

Flat double solenoid switch machine. In kit form with all difficult work completely factory finished. Packed in useful plastic "parts" box. Manufacturer also publishes booklet on the TS-5 giving many useful applications of the machine including signaling. Price $1.95, mfd. by William K. Walthers Inc., 241 E. Erie St., Milwaukee 2, Wis. NOTE: DPDT contacts if required available as extras from manufacturer.



DIAMOND MOUNTAIN S. M.

Flat double solenoid machine, furnished completely assembled with DPDT contacts for signaling, jumpers, etc. Price $1.50, mfd. by Diamond Mountain R. R., Hopkintown Road, Concord, N. H. NOTE: Special low drain model also available.

ABOUT ROTARY SWITCH MACHINES

The rotary type or "rotary" switch machines often mentioned in model railroad literature is not a commercial product but is a war surplus item. Remaining stocks now appear to be just about exhausted. These were a single coil machine which held onto themselves until the SPST toggle switch on the control panel was released. These machines are good and would have been prohibitive in price if made only for model railroad use, rather than to government war specifications.

CANADIAN MODEL RAILS —

YOU ASKED FOR THEM — AND THEY'RE READY NOW!

HO — 109 CANADIAN PACIFIC
Wood Box Car Kit $2.75

HO — 110 CANADIAN NATIONAL
Wood Box Car Kit $3.10

These kits have pre-painted sides, new type castings, and come complete with sprung trucks.

IF YOU'RE A CANADIAN RAILWAYS FAN
You'll have to have these two fine kits!

BRAND NEW AND MADE BY **BINKLEY**

We carry a COMPLETE line of Binkley HO & HOn3 kits, including the new HO Pullman Palace diner, **"LINDA"** at **$4.95** and newer still, the HO 1892 open vestibule **EXPOSITION CAR, $4.95.**

Send 10c for complete catalog of parts and kits — passenger, freight and HOn3.

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HO REPAIRS and assembly, locos only.
HO LAYOUT construction, small pikes.
LAYOUT DESIGNS, any gauge, $5 per 100 sq. ft. minimum.
Specific inquiries on above services invited
BUILT UP LOCOS in HO and HOn3 at reasonable prices.
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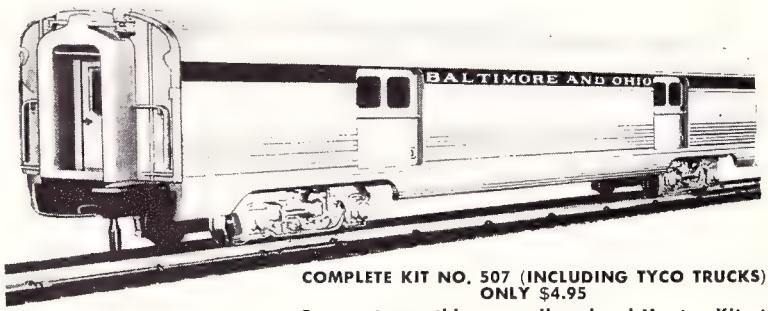
Streamline Baggage

Here's another streamline pace-setter just outshopped by Mantua. Like the coach and the combine, Mantua's new baggage is a marvel of model making perfection. Into it Mantua has engineered authentic realism plus faultless, rail-hugging performance.

Boost your head end business by adding several of these real-as-life cars to your streamline consist. Sturdy, extruded aluminum body. Formed aluminum floor. Highly detailed, pressure molded car ends. Operating baggage doors. New, high speed, smooth-rolling Tyco Passenger Trucks. Decals included for B&O, Milwaukee Road, Southern Pacific. Interesting assembly.

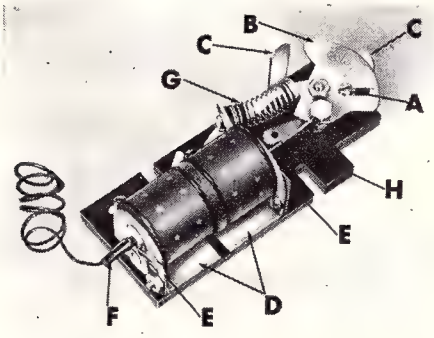


COMPLETE KIT NO. 507 (INCLUDING TYCO TRUCKS) ONLY $4.95

Be sure to see this new, miles-ahead Mantua Kit at your dealers, today.

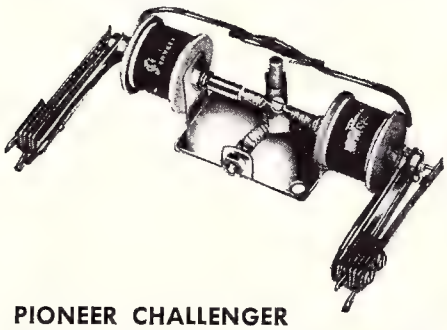
MANTUA **FIRST IN HO**

SWITCH MACHINE & VARIABLE TRANSFORMER DIRECTORY



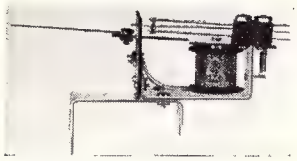
PIONEER POLARIS

Round double solenoid type switch machine. Suitable for either top or bottom mounting. SPST contacts suitable for signals or power jumpers are built in. Kit price $1.95, mfd. by Pioneer Company, 1214 W. Madison Ave., Chicago 7, Ill. NOTE: Special white coil model suitable for HO gauge and lower operating amperages available at same price.



PIONEER CHALLENGER

Round double solenoid machine with adjustable throw from 0 to 5/16"; suitable for top or bottom mounting. Automatic coil control contacts permit working machine with positive contact SPDT switch without danger of burnout. Price $3.50, mfd. by Pioneer Co. Challenger Duplex kit permits operating the Challenger machine on two switches. Kit price $2.00.



PIONEER INDIAN HEAD

Single solenoid switch machine. Essentially a relay, can also be used to operate switches, work signals, etc. DC current only. Price $2.00, mfd. by Pioneer Co. Eight bladed relay set available as extra, attaching to Indian Head unit permits almost any electrical contact setup to be made for cab control, interlocking, etc., kit price $2.50.

ATLAS SWITCH MACHINES

Data not yet available. Mfd. by Atlas Tool Co., 413 Florence Avenue, Hillside, N. J.

TURBO-JET SWITCH MACHINE

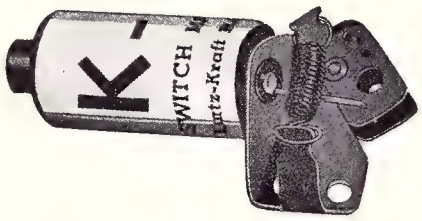
Round double solenoid machine, quite small. No further data available from manufacturer at press time. Mfd. by Turbo-Jet Products, San Gabriel, California.

KURTZ-KRAFT K-2

Round double solenoid switch machine. Under-table mounting only. Switch stand runs up through table slot and is actually attached to switch. Model K-2, $1.50, mfd. by Kurtz-Kraft.

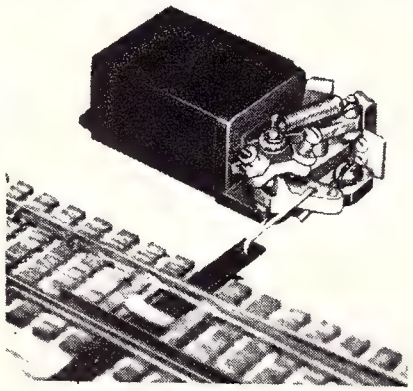
KURTZ-KRAFT K-3

Round double solenoid switch machine, economy model suitable for top or under table mounting. Model K-3, price 98c, mfd. by Kurtz-Kraft.



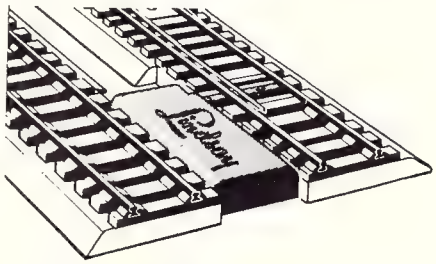
KURTZ-KRAFT K-4

Round double solenoid switch machine. For under table mounting, unit has ceramic base. Price $1.50, mfd. by Kurtz-Kraft, Rte. 4, Box 1775B, Oroville, California. Contacts for the K-4 available at 35c each.



LINDSAY SWITCH MOTOR

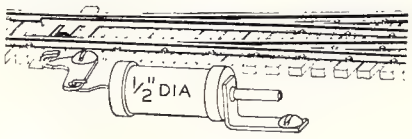
Flat double solenoid switch machine. Has positive locking adjustments for both ends of throw. SPDT contacts for indicator lights or track jumpers. Rugged, powerful; largely die cast. Price $2.95, mfd. by Lindsay.



LINDSAY MINI-SWITCH MOTOR

Small switch machine designed for HO gauge. Fits between 2 inch centers of HO track mounted on wood roadbed, will not foul pilots, steps, valve gear, etc. Price $1.95, mfd. by Lindsay, 5645 Selmarine Drive, Culver City, California.

MECHANICAL SWITCH MACHINES

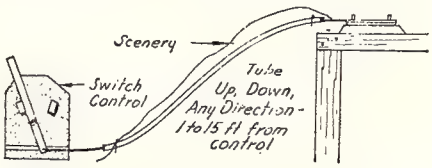


RAYMARK HI-POWER S. M.

The Raymark line of switch machines does not use electricity, but rather requires the use of compressed air, carbon dioxide, or even water or oil, to actuate switch machines under pressure. The machines throw over smoothly and the amount and type of pressure fluid or gas is optional with the user. The company manufactures a complete line of tubing, dividers, actuators, etc. (which correspond to wire, terminal strips, and toggles in an electrical system). For complete information on this system, write for complete circular from manufacturer: Raymark Products Co., Box 393, Wabash, Indiana.

MEW SWITCH THROWS

High and low level manual switch stands, manually operated at the switch. Close to prototype in appearance. Spring tension holds points over. Very popular with people who don't want elaborate installations, as well with those afraid to tackle something more difficult. Price Hi-level stand 90c. Price ground throw 65c. Plastic connector bar. 10c extra on each. Mfd. by Model Engineering Works, Arcadia, California.



GANDY DANCER SWITCH CONTROLS

Manual remote switch control system using levers at the control panel to turn switches as far as 20 and more feet from control panel. No electricity is used. System uses piano wire in thin flexible tubing. Links and angles permit changing direction of throw. Cost of installation varies with distance of switch from lever; average installation usually a dollar or less. Suitable for all gauges. Write manufacturer for detailed leaflet. Mfd. by Gandy Dancer, Box 92, West Englewood, N. J.

The Railroad Model Craftsman Directory Series started in the October 1954 issue and has covered the following subjects:

Oct. '54 Steam Locomovties

Nov. '54 Diesel & Electric Locomotives

Dec. '54 Freight Cars Part I

Jan. '55 Freight Cars Part II

Feb. '55 Freight Cars Part III

Feb. '55 Passenger Cars, Std.

Mar. '55 Passenger Cars, streamlined

Mar. '55 Traction Equipment

Apr. '55 Power Packs & Motors

May '55 Scenic Accessories

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Stocking a complete line of reliable model railroad supplies, equipment for your every need.

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NMRA HO STANDARD COUPLERS
Rail Line's new 1-pc. std. couplers —fits everything.
35c pr.
w/draft gear—50c

BLUE LINE HO PASSENGER CARS
Painted and Lettered L/T
REG. $4.95
Baggage, Mail Baggage, Coach, Day Night, Stra-Dome Coach, Diner, Observation.
Road Names: B & O; Daylight, Great Northern; N.Y.C.; P.R.R.; I.C.
SALE $3.59
OUR CHOICE OF NAMES

4-6-0 KING CLASS, HO LOCO SPECIAL
WAS 29.50
British King class locomotive, ready-to-roll, nice detail,
Sale 19.95

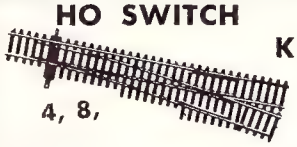
RAILROAD PAINT
Reg. 40c Bottle
Sale 19c
BLACK TUSCAN RED
YELLOW GREEN
BOX CAR RED
ROOF BROWN — BLUE
CABOOSE RED

SPECIAL — HO ALL METAL "B" UNIT ALCO DUMMY
complete
REG. $6.95
SALE $3.99

SEARCHLIGHT SIGNAL HO WORKING POLE TYPE WITH FULL INSTRUCTIONS
Reg. $1.50
Sale 89c ea.

SAVE!
IMPORTED SWISS PATTERN JEWELER'S
FILES
SET OF 12 in wood box with plastic cover
round, ½ round, flat, oval, knife, square, 3-sided, equalling, barette, flat oval, triangle or diamond.
REG. $3.50
SALE $1.99 ea.

HO SWITCH KITS STEEL



4, 8,
REG. 1.25 SALE 69c ea.

save!
61-80 CARBON DRILL SET

SPECIAL
Reg. $6.50
20 Carbon Twist Drills, Nos 61-80, on attractive, handy stand having numbered place and decimal equivalent for each drill. Acetate cover holds each drill in place.
SALE $3.99 ea.

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No. 1	Diesel Road Loader
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No. 3	Cement Mixer
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No. 5	Double Deck Bus
No. 6	Quarry Truck
No. 7	Horse Drawn Milk Float
No. 8	Caterpillar Tractor
No. 9	Fire Escape
No. 10	Mech. Horse and Trailer
No. 11	Road Tanker
No. 12	Land Rover

HO SCALE 49c EACH

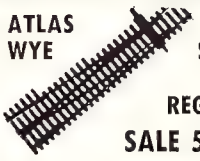
O OR 027 TINPLATE SIGNAL TWO LIGHT
REG. 3.50
SALE 1.99 ea.

O OR 027 TINPLATE SIGNAL THREE LIGHT
REG. 3.95
SALE 2.39 ea.

HO FREIGHT STATION

REG. 49c
SALE 29c ea.

ATLAS WYE BRASS SWITCH KIT



REG. 1.25
SALE 50c ea.

HO TWO STORY HOUSE
REG. 49c

SALE 29c ea.

SAVE! HO POWER PACK
with reverse switch, variable voltage control. For one-train layouts.
REG. $10.00 Value
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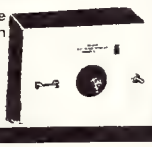

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— FLAG

Here's an easily added miniature which'll add life to any line, big or small, without foreshortening your trackage visibly as a large station might.

A WAY station on a model pike is always a problem; if we have too few of them our timetable lacks interest, and if we have too many we are shortening our main line as it looks to the eye. But as always the prototypes have an answer, such as Woodway on the New Haven R.R.'s New Canaan branch. Woodway appears on the timetable with the symbol "f"—for flag stop—beside it. No one could claim that Woodway interrupts the scenery much—or that it makes the branch seem any shorter.

In the drawing here we have the entire and complete Woodway set-up—tracks, yard, station and all. The New Canaan branch provides a more or less hourly service most of the way around the clock, while commuters' trains are run through to and from New York at the rush hours. Woodway reflects these needs and also provides us with a fine prototype having an operating gadget simple to make!

The Station

The station itself is a small shed about 20′ long, 5′ wide at the base, and with a roof overhanging in front 2½′ to keep the rain from slanting inside on waiting passengers seated on the bench. The cinder platform (use roofing paper or dark painted sand paper) is cribbed with old ties. For the benefit of patrons after dark, the New Haven has put up a line of lamp posts along the path down to the nearby road below. And for those living across the track there is a planked crossing and stairway (also of ties). Note the ramp effect at the edge of the crossing between the rails; this is to prevent anything that might be hanging underneath the cars from tearing up the crossing.

The real kick of boarding a train at Woodway is that you are the Woodway agent just long enough to raise that semaphore blade and thereby stop your train. This is done simply by pulling down the wire and hooking the looped end over an old rail spike driven into the mast for the purpose. In the old days of 4-4-O's and dim oil headlamps, there was a red lantern to hook onto the paddle before raising it. With present day electrification and bright lighting the lantern is not needed although the old hook remains. (The drawing shows Woodway in the days of steam, except for the lighted footpath.) However except for the electric overhead, it's all about the same. But in spite of that 11,000 volts AC, a red kerosene lantern still hangs at the rear end of trains by night!)

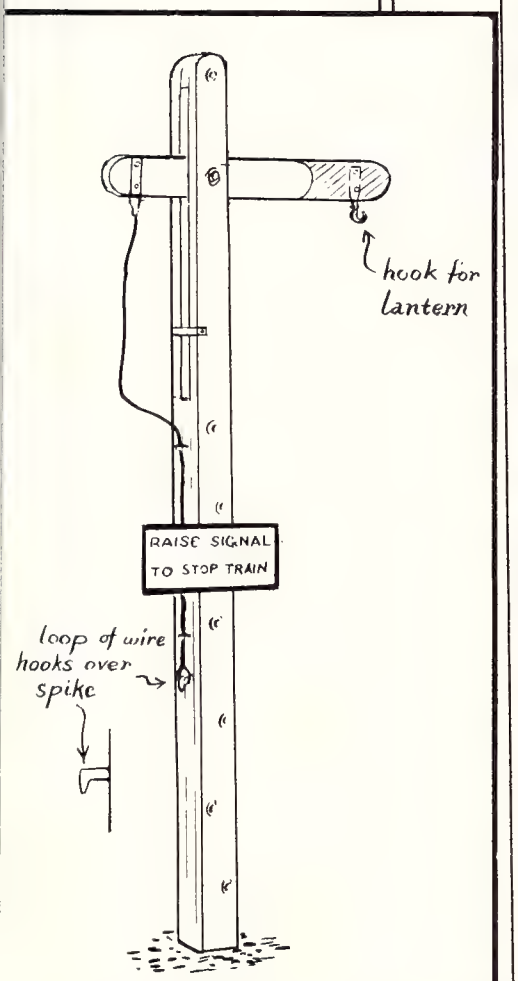
The Semaphore

The semaphore would be very simple to make for model pike use, operated according to whatever system you prefer—fish line, choke cable, electro magnet, or just plain "finger tip control". The cable and line hook-ups are obvious, while the magnetic trick would be to have a bit of iron on the end of a wire sticking down through the baseboard and a coil magnet below ready to grab it whenever energized from the control panel. The mast is built up of three 6″x2″ planks bolted together at intervals (and staggered from side to side). But the middle plank does not run full length, so as to provide a housing for the paddle, which is 4′6″ long. Total height of the mast is about 14 ft. The sign is 12″x28″. It might even be possible to have a full-working passenger—who stands in front of the shelter with the paddle raised—but after the train has arrived and pulled out again, the paddle has dropped and the passenger disappeared—supposedly on the train—but actually back inside the shelter!

A New Canaan branch engineer tells the story of a girl who took a certain train every morning for years at Woodway—without ever realizing that it was a flag stop because another "regular"—a man—had also always been there and had raised the paddle each time. Our young lady, her eyes modestly cast down, had evidently never seen him do it; she just took the train stop for granted. Came the day when the man didn't show up, the girl didn't raise the paddle, and the train sailed on past. MORAL: Girls who don't talk to strangers at railroad flag stops never know what they might be missing—a train!

STOP

by Dick Andrews



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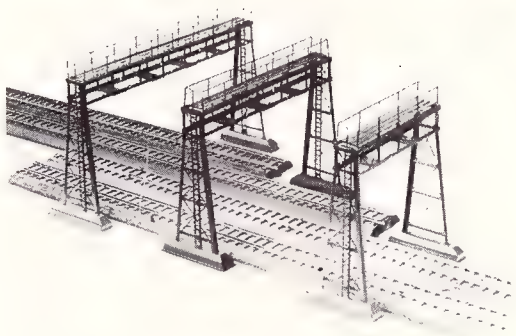

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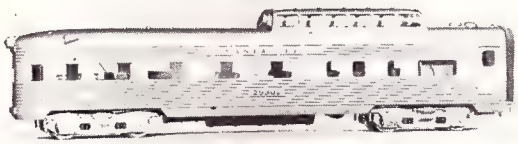

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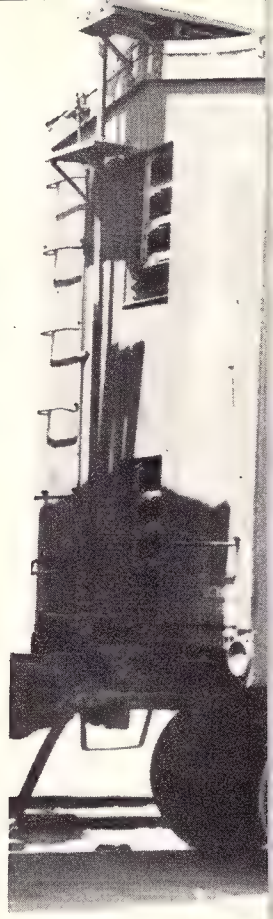


A number of southern roads operate cars similar to this ACL watermelon car. Most distinctive features are combination doors and ventilators.

WATERMELON CAR

by G. A. Stehle

Few roads own watermelon cars but you'll still see them traveling in every part of the country. Start building one now. Construction differs but little from building a box car or refrigerator.

LET'S build a watermelon car since the good old summer time is here and the watermelon season will be in. At this time the railroads will be called upon for transporting this produce around the country. Specifically, they need a car that can be used for handling and shipping in large quantities and which will deliver the melons to their destination in good shape.

At any rate, I felt that this car would make an excellent companion car for the regular box car. This type car is used mainly by the southeastern railroads such as Central Railroad of Georgia, Seaboard Air Line and Atlantic Coast Line. These cars are commonly known as watermelon cars, and have a car classification of "VA," Fruit-Vegetable. Ventilator cars are similar in design to the general box car, but with either ends and/or side ventilators, and with or without double sliding doors. When equipped with double doors, one is solid and the other screened.

In building this car I found that I could use most of the excess material including paint, that was left over from other cars and still have a car that was different enough from other box cars to make it worth while. The prototype car I have selected to model is the Atlantic Coast Line Ventilator double door wood box car. The plans and photograph was furnished me by the A.C.L. railroad company. Like plans in the previous articles these have been drawn to HO scale with all the important parts detailed. This will make the construction easier for you, whether you have built a box car or reefer before or not. Always remember to take your time and do a good job on your model, botch jobs appeal to no one. These plans are easy enough for a beginner to build from.

I always like to start construction with the floor because the car is built up from it. The sub floor in this case is made from 1/32" thick basswood sheet. Care should be taken to insure square ends and sides, floor A is next. These parts are cut from 1/8" thick basswood sheet. Floor B is cut from 1/32" thick scribed sheathing with 3/64" grooved spacing. Make sure these parts are square, cement floor parts A&B to sub floor as shown in side view-basic body assembly. Make sure that these parts are flush with the sides and ends of the sub floor, and let dry.

The roof is next; the model uses Northeastern overhanging freight car roof which is cut to the same length as the floor. Plane or sand the overhanging parts on each side of the roof so that it is even with the car floor. The sub ends can be made from 1/8" thick basswood sheet. Cement the sub ends to top of car floor so that they are even with the ends of the car floor. Cement the roof to the sub ends so that each end of the roof is even with the sub ends, making sure that the body assembly is square and use lill pins for securing it. When the car body is dry, sand the ends so that the floor, sub ends and roof ends are even. Roof parts are cut from 1/32" thick basswood sheet. The roof parts extend 3/32" over the sides of the car body and 1/8" over the car ends. See side and end view of car drawing for mounting the car roof to top of car body.

Sides on this car are made differently from other wood box cars. Sides A-C-D are cut from 1/16" thick scribed sheathing with 3/64" spacing. Cement car sides A to sub ends, floor and roof. The top edge of the sides are pressed against the underside of the roof and 1/16" below the car floor. Side part B is cut from 1/16" by 1/8" and car part E is cut from 1/16" by 1/16" strip wood. For mounting sides B-C-D and E to car body see side view assembly drawing of car side. When the sides are dry, sand the side ends so that they are even with the sub ends. The car ends are cut from 1/32" thick scribed sheathing with 3/64" grooved spacing, and shape. Also cut openings in the ends for the ventilators to be mounted later. Mount the ends to the sub ends, roof, and floor ends. When the cement is dry, sand the ends even with the car sides.

The end fascia board ends are cut from 1/32" by 1/16" strip wood and cement these to car ends, the end view shows how these parts are placed. From the same material cut side

fascia boards A and cement to top of car sides A. Next cut top door guides from 1/16" wood angle stock. Mount the top door guides so that one leg of the angle is cemented to the under side of the car roof. Set aside to dry.

Lay out the location of the center sill, bolsters, and cross braces on the bottom of the car floor. The center sill is cut from 1/8" by 3/16" strip wood and is centered on the car floor. Cut two bolsters from 1/8" by 1/4" strip wood and shape like in the drawing, cement bolsters in place and let dry. A total of ten cross braces are cut from 1/32" by 1/16" strip wood. These are cemented in place as in bottom view drawing. Next add AB air brake set. When these parts are dry, drill No. 50 holes in bolsters for mounting freight car trucks after the car is completed.

The roof ribs are cut from 1/32" by 1/16" strip wood, cemented to top of the car roof at the location shown in the drawing in side view of car. Roof walk is cut from commercial roof walk material or you can make up your own from 1/32" sheet or strip wood 1/4" wide. There should be three planks; cement the roof walk to the top of the car, and be sure that it is centered properly. Add two lateral roof walks. See side view of car drawing for mounting these parts in place. The ventilators are made from wood capped siding, cap spaced 1/8" and 1/16" thick. Ventilator handles are cut from 1/32" square strip wood. See end view drawing of car for the location of these parts.

The ladders and grabirons are added to the car. You can use Northeastern preformed grabirons No. 2. If preferred, the builder can make his own from No. 26 steel or brass wire but it's hardly worth the effort. Use No. 74 drill for drilling holes for the ladders and grabirons. Next bend four steps from No. 26 wire and insert in the same manner as the ladders and grabirons. Use No. 26 wire for brake rod. Cement the brake platform in place and add your brake rod and brake wheel.

Now we are ready to make the two solid and two screened doors. The two solid doors A are cut from 1/32" thick scribed sheathing with 1/16" grooved spacing. Next cut six door parts A from 1/32" by 1/16" strip wood and cement to doors A as shown in side view of drawing. Next cut four door parts B from the same material and cement these parts in place. Cut eight upper door guides from 5/64" wood channel stock and add four of these guides to the solid door A. Next make the two screened doors B. Start with the four vertical door posts, which are cut from 1/32" by 3/32" strip wood. Notch these door posts as in the drawing. From the same material cut ten horizontal slats. When you assemble these doors lay a piece of wax paper over the drawing and pin the right and left door post on the location shown on door drawing B. Next cement the horizontal slats in place and let dry. The iron bars on these doors are made from No. 28 steel or copper wire which are cut to the same length as the doors. Where the bars are to be mounted notch out so that the bars fit flush with the door frames. When the doors are dry, remove from the drawing and add two top braces on the front of the doors cut from 1/32" thick basswood sheet and shape as in the drawing.

The car is painted freight car red.

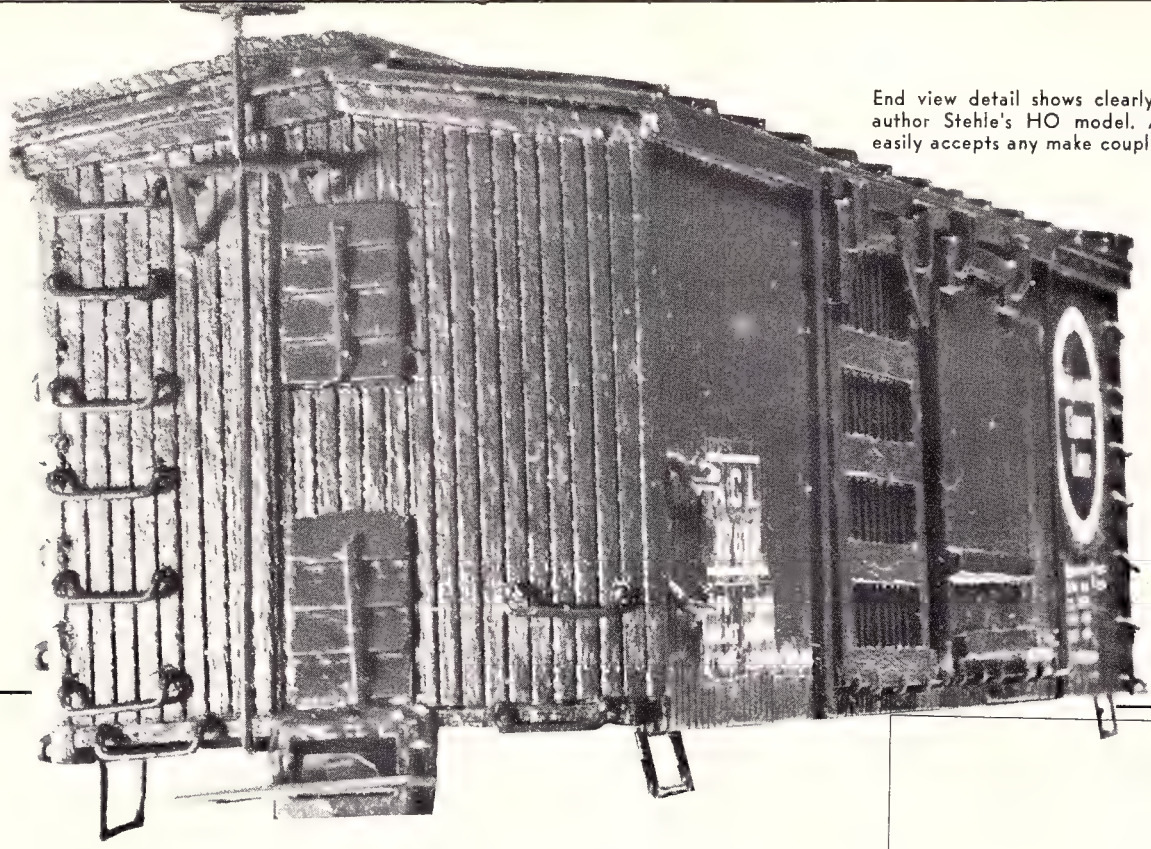
MATERIAL LIST

BASS WOOD STRIPS
1 length 1/32" by 1/32" by 24"
1 length 1/32" by 1/16" by 24"
1 length 1/16" by 1/16" by 24"
1 length 1/16" by 1/8" by 24"
1 length 1/8" by 3/16" by 24"
1 length 1/8" by 1/4" by 24"

BASS WOOD SHEET
1 length 1/32" by 2" by 24"
1 length 1/8" by 2" by 24"
1 length 1/16" by 3-1/2" by 24" (3/64" scribing)
1 length 1/32" by 3-1/2" by 24" (3/64" scribing)
1 length 1/32" by 3-1/2" by 24" (1/16" scribing)
1 length capped siding (caps spaced 1/8"-1/16" by 3-1/2" by 24"

PRECISION WOOD SHAPES
1 length roof walk (HO)
2 lateral roof walks (HO)
1 length 1/16" wood angle
1 length 5/64" channel
1 length freight car roof (HO overhanging)

MISCELLANEOUS MATERIAL
1 pr. freight car trucks
1 pr. couplers
1 AB air brake set
2 No. 2 3/4" round head wood screws
1 brake platform
1 brake wheel
1 length No. 26 steel or brass wire
1 length No. 28 steel or copper wire
36 No. 2 Northeastern pre-formed grabirons
Paint and decals



End view detail shows clearly in this view of author Stehle's HO model. All wood model easily accepts any make coupler; is tuscan red.

SUB

ROOF WALK

CENTER SILL - 1

END ROOF RIBS - 4

ROOF RIBS -24

SILL COVER PLATE

END FASCIA BOARD
4

FLOOR

TOP DOOR GUIDE - 2

END WALK
2

DOOR A
PART B
4

GUIDE
4

BOLSTER - 2

ROOF A
1

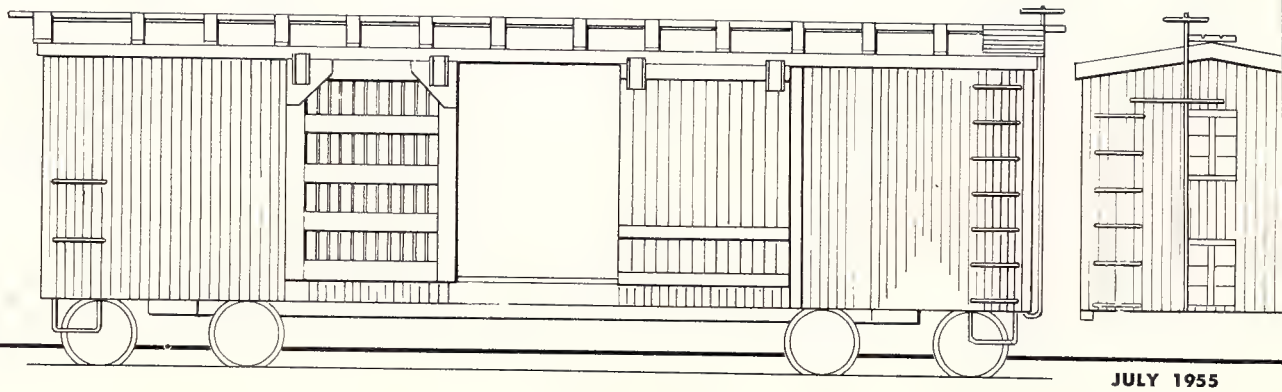
DOOR A
2

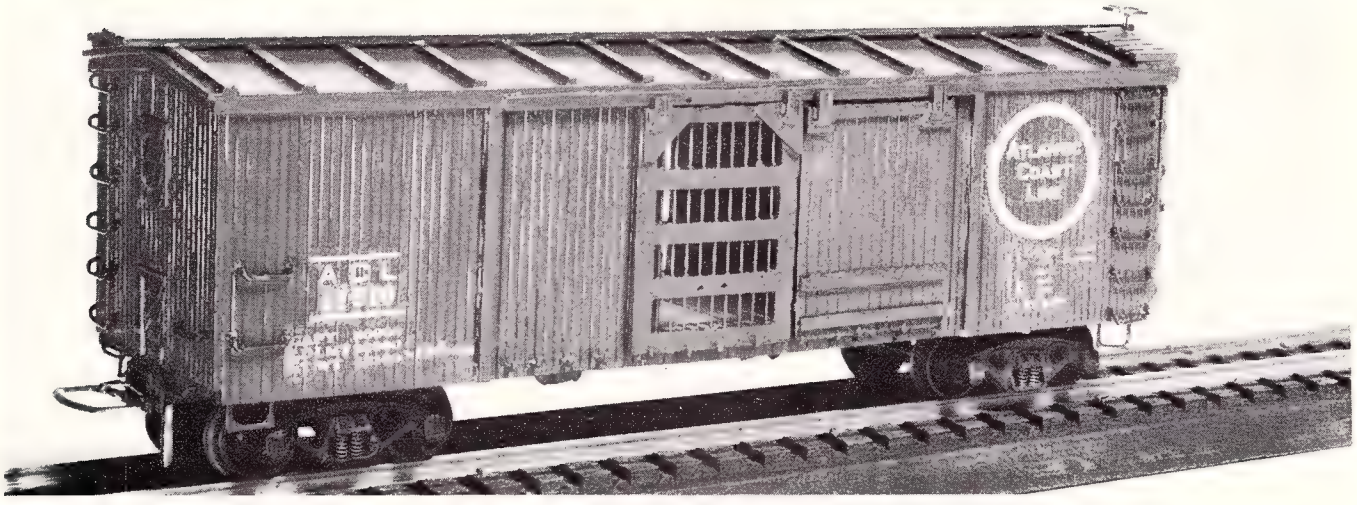
BRACES
4

FLOOR PART A
2

ROOF B - 2

V. HANDLE
4





Precision wood siding and parts make this car an easy one to build, even though many parts are required. HO model is lettered with decals.

- 1

SIDE VIEW

CAR END SUPPORT
2

SIDE A

SIDE B

SIDE C

SIDE E

DOOR OPEN

SIDE D

DOOR A -PART A-6

BOTTOM DOOR GUIDE - 22

SIDE A
4

SIDE C
4

SIDE B
4

SIDE D - 2

CAR END - 2

CROSSBRACE
10

SIDE FASCIA BOARD
4

VENTILATOR
4

DOOR B BARS-18

DOOR B VERT SLATS
2 R - 2 L

DOOR B SLATS
10

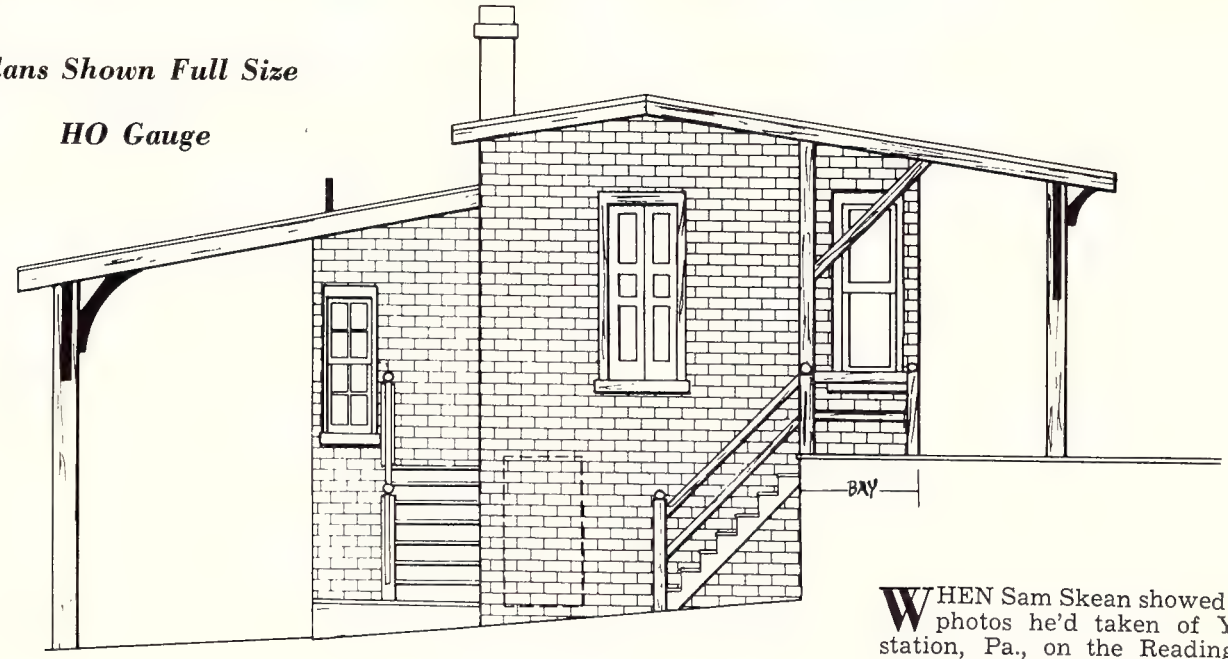
BOTTOM VIEW

END VIEW

BACK VIEW DOOR B-2

Plans Shown Full Size

HO Gauge



YARDLEY

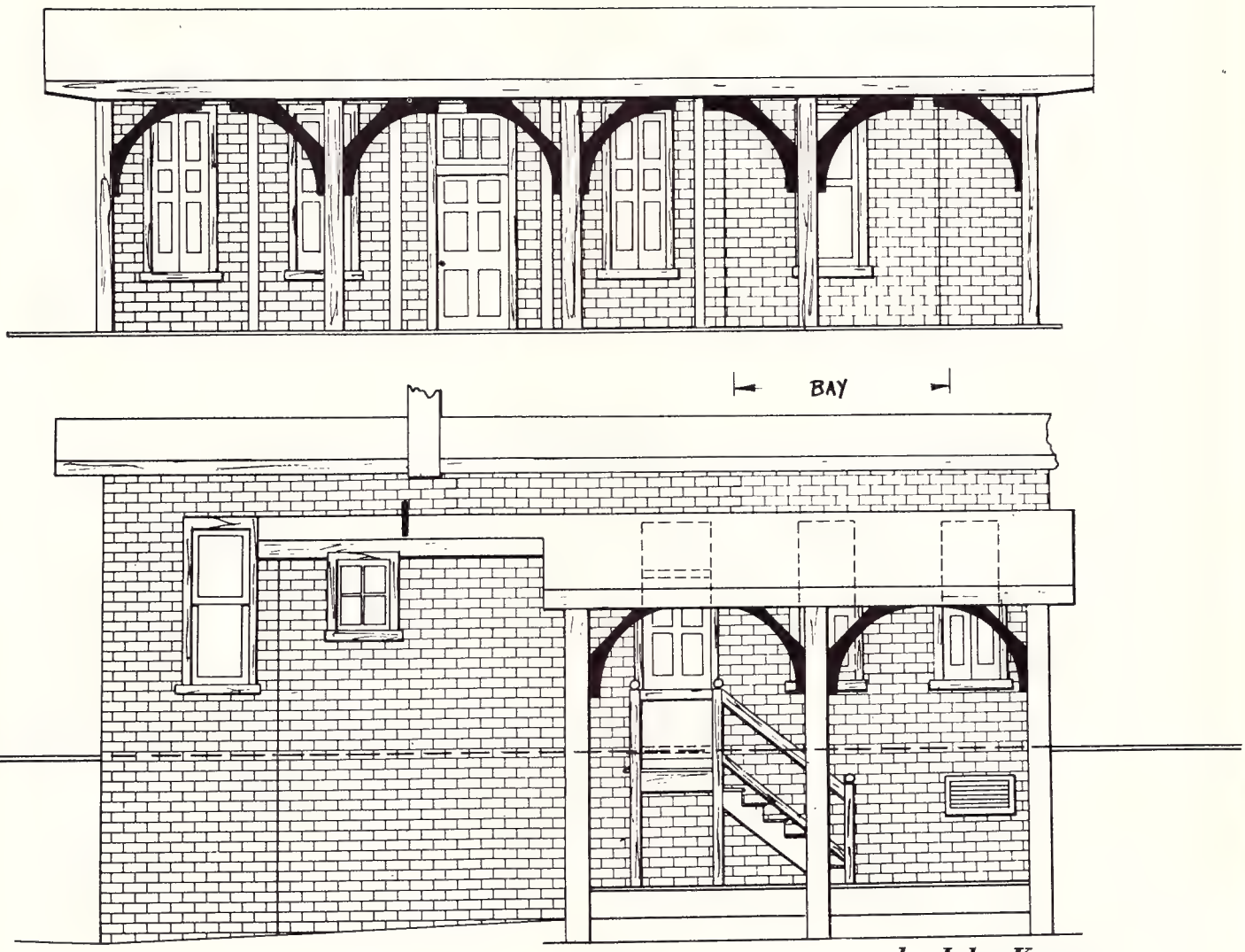
STATION

Reading lines

Reading Lines, Yardley, Pa.

WHEN Sam Skean showed me the photos he'd taken of Yardley station, Pa., on the Reading Company line, I felt that it would be an excellent little structure to have on my layout. The idea of the track level being somewhat above the level of the ground was appealing, and while not uncommon in actual railroading, is very rare in model form.

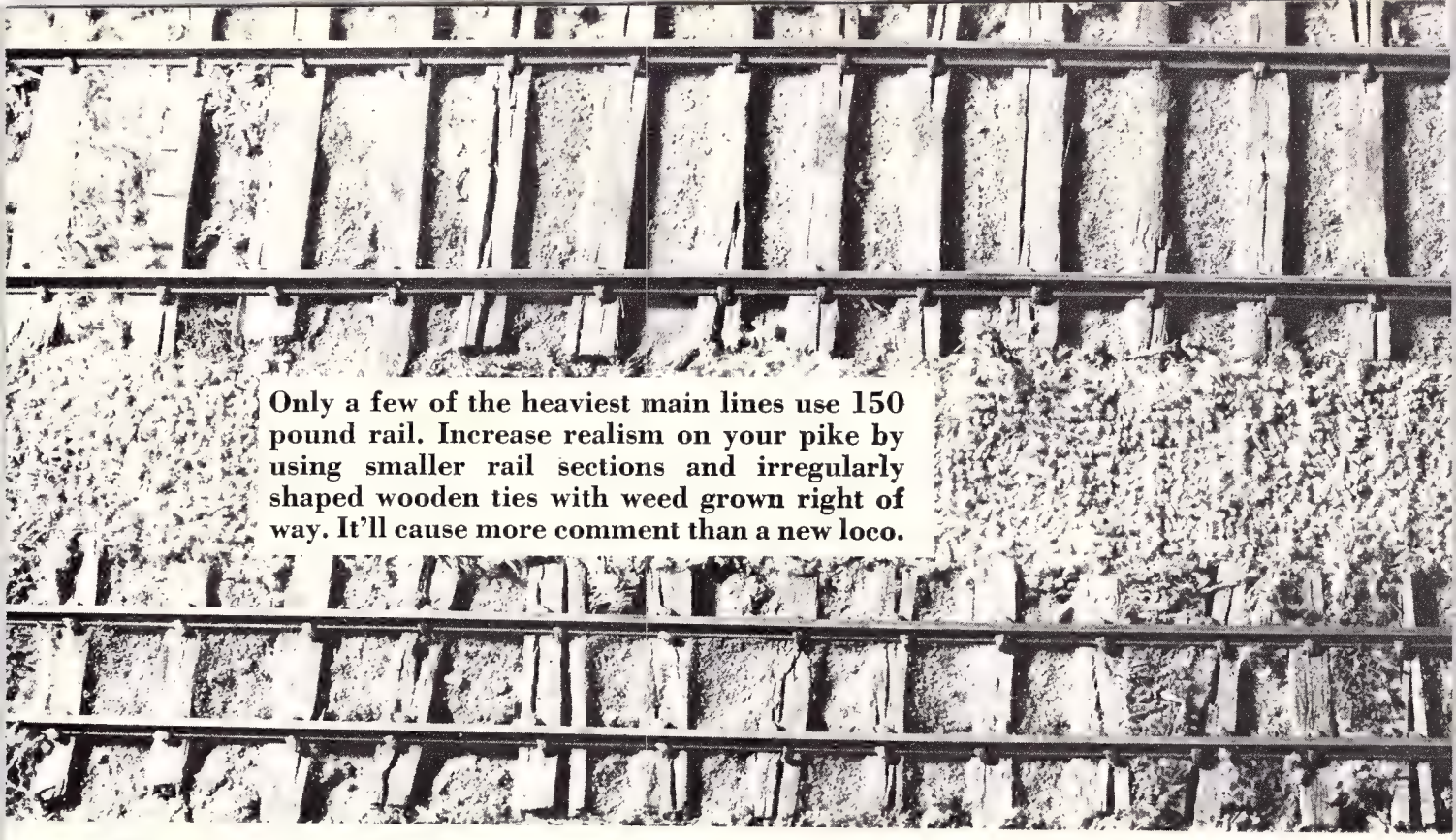
The simplicity of the station lends it to modeling and the structure could be built in two evenings. Precision cut wood could be used throughout although many might prefer to use bristol board, covering it with building paper. The station is now covered with asphalt shingles, although it obviously once boasted either wood shingles or clapboard siding. In building the station, don't forget to add the advertising posters, so common on suburban stations everywhere, yet usually overlooked by most builders.



by John Kemp

The left end of Yardley station is not as far above ground level as the other end, since grade drops and ground slopes. Odd two level design is unique, rare in model railroading.

Right end of station shows steps from low ground to platform level and doorway leading to cellar. Note coal chute at far end. Station now has asphalt shingles; was once wood sided.



Only a few of the heaviest main lines use 150 pound rail. Increase realism on your pike by using smaller rail sections and irregularly shaped wooden ties with weed grown right of way. It'll cause more comment than a new loco.

TRACK REALISM

by Dick Andrews

THERE'S nothing like a good fast ride on a modern super-highway. The road leaps out ahead, pushing the landscape out of the way to either side. Yet as we sit there and "pour on the coal" to the old bus, it begins to become a little static. Mile after mile, more of the same. Hey! Look at that little side road running off there, winding up through that ravine. What's in there? Might be anything. And as we wind around the sharp curves, and up and down over humps and sags, the next bend always seems to promise something new and unexpected. Not making any time now to speak of—but—well, we're a lot closer to the countryside. We could have covered this stretch in a lot less time on the highway, but we sure wouldn't have seen as much!

Right there is the difference, perhaps, between the big modern heavy railroad—and the little light branch line that ambles off to serve some local valley. Both are fun. I enjoy both myself. But for solid model railroad values and enjoyment in anything less than a big club, you can't beat the light branch line—narrow gauge or "just as wide." The mail we are receiving here sure shows that, in letter after letter!

Rail Size Is Important

The most typical aspect of the light branch line is its track. Like the side road, it doesn't shove the landscape aside, but adapts itself to the slope and swing of the land. Locating engineers took reverse curves in preference to deep cuts and high fills or viaducts. The ties are laid practically on the ground, or with a minimum of ballast—instead of riding on a broad Chinese wall as on the heavy main RR. This suggests an entirely different type of treatment—and even if you are a main line man 99% of the way, it might be fun to try it for a spur line to some little used gravel pit or quarry, or the like. It will serve to emphasize how heavy the rest of your track is, by simple contrast.

In O gauge, there are several different sizes of small rails to choose among, lighter than the .172" rail generally used for main line. Anything over HO rail will clear the spikeheads if you keep them down tight. I have used HO rail (which scales 70 lbs. to the yard in O scale) but only for very little used sidings and then with tie plates to keep spikes away from the inner base of the rail. When you use these smaller rails, you will be amazed to find how much wider they make the track gauge seem.

O gauge ties can be ordered from various houses at little cost, or are easily made. With this smaller rail, the old 8 ft. tie, around 9x 9, will do fine. Put the ties fairly close together — 18" on centers or so — and you will increase the length of the track visually. Lower or thinner ties can be used for that sunk-down-in-the-ground look. Some birch garden stakes found their way into a stretch of siding on my pike not long ago.

These same general ideas hold for S and HO. S wheel flanges are a little deep for the HOn rail unless you put it down with pliobond or similar adhesive. The HOn rail is of course the only thing for HO. It sure does make a difference.

Grass Between the Rails

On a really down-to-earth stretch of track, the grass is right in there between the ties. Turkish toweling has often been used for grass, and thin ties might be spiked down right on it to a baseboard underneath. Or the ties might be laid down and strips of toweling cut to fit between. This is still rather like a lawn, and taller weeds will be wanted. The best material for this is perhaps rough twine. Lay the twine out on a board, unravel one end of it a bit, and cut across with a sharp knife to the height you want for that clump. Put down a dab of thick oil paint and set the clump in it upright. A little sand or sawdust in the paint will complete the effect.

Painting the grass and weeds is done very simply with artist's oil colors and a stiff brush. Just lay out a dab of green or brown on a slab of glass, cut way down with turps, and touch it to the "vegetation." It will soak it right up in fine prototype style.

The ties will probably look new, and will also "age" by the same paint treatment—a little touch of black thinned way down in turps will turn them silver-grey. Perhaps you had no trouble splitting the ties as you drove in the spikes, for that old rotted look But if no splits, attack them from the ends with a knife a bit. Hack out a

little wood here and there. Wood lierally erodes like rock over a period of time.

How Real Can It Be?

Let's imagine a stretch of branch line track with some of this treatment. Down at the junction point with the main line, our branch line is of course right up on the high ballast fill with the big road. Any interchange sidings, though, will probably be almost lost in high weeds, probably growing in a scraggly fashion in cindery ground. A lot of loco fires have been cleaned or dumped, and a lot of coal has been shoveled around here over the years. The rails on these sidings can be really light and wobbly. Cars will be moved on them only slowly. An old tie or hump of earth or cinders will act as a burner at the end of track.

Our branch line starts off on its own, heading for the hills. It will probably drop down some in leaving the higher fill of the main line, and then she'll begin to climb right towards that ravine. She'll cross a tar road and disappear between some trees—just enough clearance for the cars. Almost like a tunnel! Climbing through the ravine, she'll have some rather well kept track; grades and curves call for that. Now she's up in the high lands, running along rolling ground down into the sags and up over the humps. Pretty straight—but far from level! Why not model this rarely-done effect on a strip of homosote which will hump up and down very nicely and gracefully. The grass is always greener in the bottoms of the sags, and thins out and is browner up at the tops of the humps. Let the ties get mossy and green down in those sags too.

Now we stop for water at a little pond, and find a siding there. This siding should be almost "out of sight" in grass—for a very good visual reason. It will make your main track look longer! And the same will be true at your small branch line terminus — the more the run-around tracks and sidings are blended in with the ground cover—leaving the main line showing up clearly — the longer the effect of the whole thing will be. A three foot length of string always looks longer than a similar length of hawser. But naturally that smoked-up little engine house will have in front of it, the lead track with ash, coal, and all the wonderful dirt of a steamer (even if you've banished them and have gone diesel).

Narrow Gauge Jct.

C. F. Donaldson of York, Pa., writes that he would really like to give 2 ft. gauge a whirl but has already launched into HOn3. Here's an idea, Fred — keep the HOn3 — and consider Sn2 — or 2 ft. in 3/16" scale — to run on the track too! The track will be a scale 2" too wide—but otherwise perfect—HOn3 trucks will give you just the right wheel!

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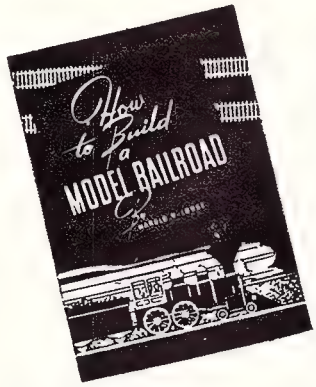

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News and Views of TT

By Glyn Lewis

WELL, here it is the July issue . . . so soon? You'll be reading this in the middle of June, and we're writing it on May 1st. Now you've all heard about . . . "No interest in model building all summer long." How true is that? How many of you are lucky enough to get away ALL summer, or every weekend? If you live in a city and are employed, chances are most of your evenings are spent at home, and even some of the weekends, so we feel that although the hobby may slow down during the hot weather, it does not die.

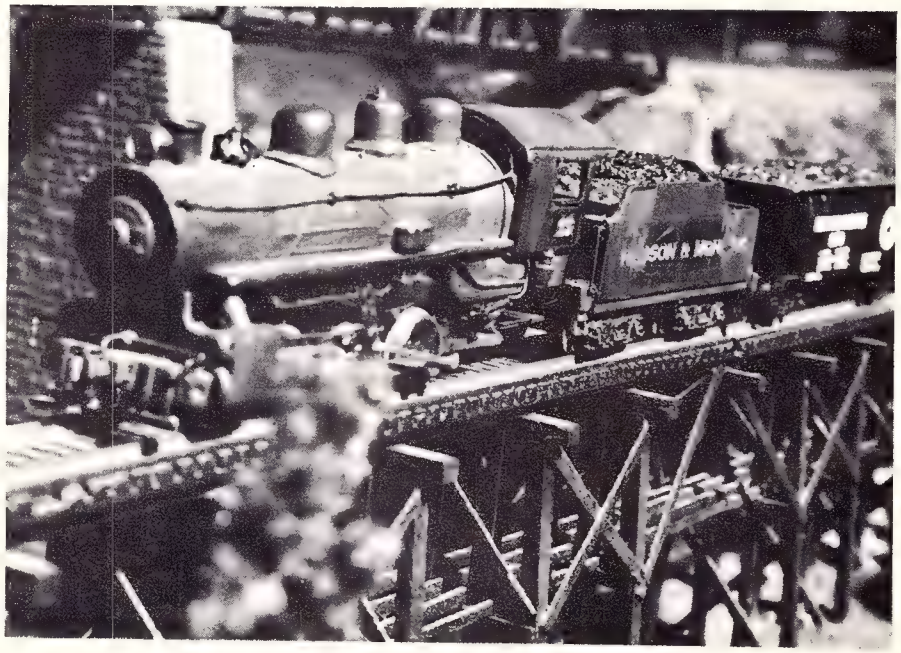
You Need More Trees

Speaking of summer, as we have been, seems that most model pikes favor this season, and with good reason, particularly in the foliage department. But too many layouts are awfully stingy when it comes to trees. Now there are many miniature trees available, Jean Carpenter, Tru-Scale, Tom-Thumb, Model-Hobbies, Rail Chief and others produce some exceptionally fine types. You have read quite a few articles in this magazine on how to make realistic trees, yet so many pikes seem so barren. Some sage once said "It's the little things that count" which is really true in model building (and not only in TT). One of the things we have observed in model scenery is cleanliness, true it may be next to Godliness, but time, people and age leave their marks. We have oft remarked on this. But it's still true, the little things like stains on walls, cracks in concrete, faded paint, worn steps, make the difference between a model and realism.

We are very happy to note that a new distributor out on the West coast is specializing in TT gauge. For the information of you west coasters the name is Roberts Enterprises, 5431 West 123rd Place, Hawthorne, Calif.

Individuality Is Lacking

The advent of the "ready to run" in HO, has it seems, killed much of the individuality that made model railroading so much fun. Even in structures there seems to be a sameness on too many model RR empires. A lot of us who don't have the talent or perhaps the tools to build from scratch can still enjoy "free-lancing." We tried it with one of H.P.s fine little 0-6-0s. The result is pictured on this page. There is certainly nothing wrong with the H.P. Product as it comes from the box, but maybe you want it to look a little older, or a little different than the other fellows. What did we do? First we sawed and filed off the domes (easily done) and replaced them with some from Sherman Dance. The pilot was replaced by one you can get from E.S. Nielsen. One of these was fitted to the rear of the tender as well. The cab was raised a bit. Headlight was filed off and a Nielsen unit was attached ahead of the stack and on the rear of the tender for a backup light. A couple of bits and pieces like arm rests on the windows and coupler lift bar on the pilot completed the job. Add an engineer and a fireman. Repaint with engine black mixed with a bit of reefer white to give it a smokey grey look, a few streaks of rust (box-car red) and Voila! a venerable switcher for your yard. Just to be sure anyone could do this we used NO solder but made all our changes using only model cement.



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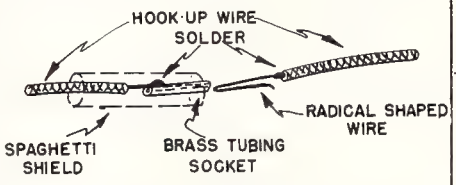
PLUG IN WIRING

IN building a model locomotive, whether from a kit or from scratch, even the little bit of wiring from the motor to the tender for pick-up is a nuisance, yet a necessary one. When you get involvied with wiring up a working headlight or a rectifier you sometimes get in a situation where you cannot remove the superstructure entirely on account of the wiring back to the motor. While of course you can unsolder the wires or remove a few screws and separate the mechanism, superstructure, and tender, it is a lot easier to have plug-in or plug and jack wiring.

Now if you haunt the radio stores you will be able to locate small multiple plugs, but these, like so many things, cost money, whereas you can manufacture home-made plugs with very little expense. About all you need for a slew of sockets is a ten or fifteen cent length of small bore brass tubing which your hobby dealer has. For plugs you just need some springy or hard brass wire. And for protection you can buy one or two lengths of spaghetti at ten cents each.



Your socket in every case will be a short length of the tubing. This will usually be soldered to something or pinched against it by screws. A socket for headlight lead may be soldered to one of the brush mounts of your motor, so that when you remove the superstructure (with headlight) you simply unplug the headlight lead from the motor so you can put the superstructure completely out of the way. A socket for engine-tender pick-up wire can be soldered or screwed to the underside of the tender, or may be inserted as a tight fit in a specially drilled hole in the front or bottom of the tender. Where the socket must be insulated from the material around it, it may be wrapped with Scotch electrical tape and fastened down with this. For a more rigid mounting slip spaghetti over the socket, then force into a larger piece of tubing which has been soldered or screwed down. The spaghetti will insulate.

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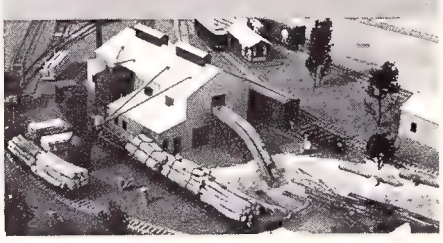

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HAVE: Old Lionel equip. to trade for Penn Line HO locos or anything in Ives rolling stock or literature. John A. Horton, 4115 Francis Ave., Cincinnati 5, Ohio.

TRADE: Argus C-3, rf, flash, etc., for HO equip., kits. W. R. Chilcott, Juniata College, Huntingdon, Pa.

TRADE OR SELL: Lionel GG-1, single motor in excel. cond. Santa Fe twin motor, Pass. and frt. cars, switches, etc. Want 16mm equip. projector, camera, films, etc. or cash. Kensington, Box 21, Brooklyn 18, N. Y.

TRADE: 4 Lionel engines, several cars for Marklin equip. Send for list. Tom Miller, P.O. Box 42, Fairbury, Ill.

FOR SALE: Lionel 027 twin Diesel, 6 assted. frt. cars, perfect cond. $40.00. J. Benkovitz, 78-23 90 Ave. Woodhaven 21, N. Y.

WILL TRADE: HO locos and cars for Ham radio equip., prefer Hallicrafter S40B or Globe Scout XMTR. Irvin C. Sears, 1624—7, Portsmouth, Ohio.

FOR SALE: 1 AF Pacific loco. and tender with smoke, choo-choo and air chime whistle, 1 baggage car and 2 coaches with link couplers, oval track and transformer. Gd. cond. $30.00. J. H. Dennison, 605 8th Ave., Zephyr Hills, Florida.

SELL OR TRADE: Unused NMRA kit for push button cab. $9.50 Ins. PP. G. H. Balke 4532 Kensington Dr. San Diego 16, Calif.

SWAP: Keystone 8mm. Olympic movie camera for HO locos or kits. M. L. Townsend, Box 106, Hebron, Md.

HAVE: AF train and track, gd. cond., also switch box. Sell for $15.00. For information write Lee Cummins, Box 186, Crescent City, Calif.

SWAP: 14 Audel electric books and 1 machinery handbook, worth $25.00, for HO gauge Atlas or similar turnouts and crossovers or other items. Also AF trail blazer loco. and tender with choo choo and smoke to trade for power pack, car kits or diesel locos. Jack Beard, 100½ S. Terr St., N. Baltimore, Ohio.

FOR SALE: Kits, M.D.C. 0-6-0 $11. M.D.C. Atlantic $20. Casey Jones, flash removed, W.T. $18. 9 car kits, 25% off, 10 blt. up cars, gd. to excel. $1.50 each. Send for list. No. 3 Atlas L.H. turnouts, new $.70 each. New S.S. turntable kit $14. New nondescript switch machines 50c each. Would consider trade of HOn3 kits for any of the above. Lawrence M. Bixby, 416 Pearl St., Burlington, Vt.

SELL OR TRADE: Scintilla Unipack $8.00. Hobbyline F.M. switcher, motor needs slight work $8.00, 21 cars w/trucks and Kadee couplers $2.00-$3.50 each. RMC, MRR, MT, Toy Trains, etc. Truscale track and roadbed, Hobbyline snap track, many auto, and dummy M.D.C. couplers. List for stamp Trade for enlarger in gd. cond. P. J. Welling, Jr. 5230 Superior Ave. Cleveland 3, Ohio.

FOR SALE: HO Brass Betsie 2-8-0, unpainted, asembled, runs fair, rebit. L-730 Lindsay motor, cost $32.50. Make cash offer. Butala, c/o Box 520, Mar Vista 66, Calif.

WANTED: Std. equip., switches, track, cars, parts. State cond. and price. Also picture from catalog of AF eng. No. 4654. All mail answered. S. Sharman, 4900 W. Chicago Ave., Chicago, Ill.

TRADE: Leah's football and Rupp's basketball books. Never used. Worth $3.00 each. Want TT or HO equip. Ed. Gautier, 718 Upperline St., New Orleans, La.

WILL TRADE. Passes. Also modern equip. for old time. David Craig, 607 Oakhill, Youngstown, Ohio.

TRADE OR SELL: Varney F-3 diesel A unit, unpainted, never run, for any small HO loco., preferably switcher. G. Byrne, 4466 Elston Ave., Chicago, Ill. KI-5-4389.

FOR SALE OR TRADE: Lionel No. 675 loco. and tend. $16.00. Lionel 6257 caboose $2.25. Lionel 6419 work caboose $2.50. Lionel 6457 illum. caboose $2.75. Lionel 456 coal ramp $7.50. AF 350 Royal Blue loco. and tend. $7.75. Will trade for other Lionel equip. D. Haustein, 94 Winans Ave., Cranford, N. J.

WANTED: Amateur printer by amateur journalist to publish amateur quarterly "The Bachelor Hobbyist," all about model railroading in California, all gauge pikes. A. F. Bruns, P.O. Box 520, Mar Vista 66, Calif.

WANTED: Raleigh cigarette coupons in change for HO equip. Have Varney dockside, Atlas track, Mantua frt. kits and couplers, blt. up cars, sprung trucks, Ideal bldg., model tools. 3c stamp for details. L. E. Congdon, 1114 Seymour Ave., Columbus 6, Ohio.

WANTED: Lionel Std. gauge observation car No. 416 brown color only with letters New York. Must look like new. No repaint jobs. Will pay $60.00. Write Joe Schiffer, 70 South 9 Street, Brooklyn 11, N. Y.

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FOR SALE: 2 AF trains, excel. cond. Santa Fe diesel A & B unit with 4 streamlined cars. Loco. and tender with 7 frt. cars, 3 auto, 71 pcs. track with track locks. 2 assts. access. Transformer. Sell for $100. or separately. Send stamp. W. Hamot, Box 78, Cedar Point Park, Cedar Lake, Ind.

FOR SALE: Lionel 0-027 pass. cars, new. Also frt. Send for list. Want 1933 to 46 Lionel, AF catalogs. Joe Thill, 5803 O St., Omaha, Nebr.

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WANT TO TRADE: Mantua mike for Varney diesel switcher -or dockside. Radius too small for mike to go around. Bill Hendrick, Homestead, Florida.

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SALE: Lionel Std. gauge lumber car No. 511, gondola No. 512, cattle car No. 513, reefer No. 514, tank car No. 515, caboose No. 517. Gd. cond. 0-4-0 electric No. 318E. L. J. McEvoy, 34 Llanberris Rd., Bala Cynwyd, Pa.

TRADE: 35mm. Univex Mercury candid camera F2 lens, very gd. cond. for what have you in O gauge equip. F. Henn, Jr. 1107 Niagara Falls Blvd., R.F.D. No. 2, Tonawanda, N. Y.

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FOR SALE: Lionel Hudson 2056, 10 cars, separate or as unit, make offer. Will trade for HO. Stamp for list. Walter Sakawich, Jr. 110 Locust St., Haverhill, Mass.

FOR SALE: Lionel O gauge Santa Fe twin diesel 2343. $25.00, 2531 Obs. car, 2533 and 2534 pull. cars., $20.00. 8 sections c, and 15 section strt. track $4.00. No. 167 whistle reverse controller. $1.50. F. Courtnyea, 2219 Willow Ave., Niagara Falls, N. Y.

TRADE OR SELL. Nickel silver rail — flat bottomed, new, for HO equip, kits, etc. P. Barrows, 58 Terbury Cres. Erdington, Birmingham 23, England.

FOR SALE: Varney HO Super engines, sprung drivers, Pacific, Mikado, Consolidation. Send stamp for list, price and description. Thomas Clark, 2151 Gebert Rd. Columbus 11, Ohio.

FOR SALE: $300 Lionel layout O and 0-27 and 4' x 8' table. Sacrifice at $100.00. Write for list. R. Gillen, 2115 Washington Ave., Bronx 57, N. Y.

HAVE: English Pacific A unit die cast coaches, Varney caboose, KD couplers. Want frt. hogs, flat, tank or gond. cars in HO. Geo. Pfusch, R.D. 1, Spartansburg, Pa. HAVE: Lionel 072 solid rail track, 2 pair 072 tubular switches, locos. No. 2332 GG1 red, 250E, 238E, 226E. Also some Lionel catalogs between 1930 to date. Want Lionel Std. gauge large locos. and cars and No. 840 power house and No. 300 bridge. J. Rudley, 711 North 6th St Philadelphia 23, Pa.

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FOR SALE: Rolling stock, track, houses, parts, switches, etc. Also RAILROAD MODEL CRAFTSMAN, HO Model Trains, Model Railroader, etc. Send stamp for list. M. Berger, 1301 E. 37th St., Brooklyn 10, N. Y.

HAVE: Lionel GG1, No. 97 coal elevator, No. 2625-78 pullmans, 30 frt. cars, 726, 2033 locos. .022 switches, etc. Will sell or trade for Lionel No. 773 Hudson O ga. diesels, diesel switchers or 072 electric or hand switches. R. H. Christensen, 157 Manor Parkway, Rochester, N. Y.

FOR SALE: '43 Car Builders Cyc. $8.50, '26 Rwy. Eng. & Maintenance Cyc. $9., misc. issues RAILROAD MODEL CRAFTSMAN '53-54 and Model Railroader '46-54 25c ppd. Trade: new model rr. equip. for used equip. plus cash. Used pocket sized books for rr. books, mags., or equip. D. M. Christisen, Box 122, Columbia, Mo.

WANT TO BUY: Cleveland S C& O 4-6-2 kit, blt. or in between any cond. Will pay well. Any info. welcome. All queries answered. Pvt. Delwyn R. Amerine, US 54153298, 51st Ord. Co. (Svc) Box 44, APO 731, Seattle, Washington.

FOR SALE: Std. Gauge eng., track, cars, switches and access., gd. cond. E. R. Bennett, 1229 Central Ave., Louisville 8, Ky.

FOR SALE: No. 2321 Fairbanks Morse twin diesel, No. 2332 GG1, 17 frt. cars, 25 O ga. track strt. 8 O curved track, 16 072 curved track, 1 water tank, 1 Grantry crane, 1 remote control track. First $100. takes all. William G. Taylor, 62 Garden St., Bridgeville, Pa.

SELL OR SWAP: New 13 pc. drafting set, Thimbledrome model racer, $17. worth of View Master Steroscope equip., German made demonstration model of 4 cyl. auto eng. 126 issues MI, PSM, PM and Science and Mechanics. DeForest's Radio and TV cour. Want HO turntable, locos. and roling stock. William J. Copeland, 66 Clark St., Portland 4, Me.

TRADE: For O ga. locos. and cars, complete bait casting set $20.00. El flat Buchart gold saxaphone with case $75. 8M marine editor $15.7 HO old time cars for $20. Fairbanks hand motor drill $12. All in ex. cond. G. Poyer, 434 Walnut St., Yonkers, N. Y.

WILL SWAP: Back issues MODEL CRAFTSMAN for N.R.L.H.S Bulletins No. 65 and No. 56, C. & N.W.R.R. Pioneer Railroad 1948, History of the Place Names on the C & N.W.R.R. 1910, Dec. 1948 Model Railroader, Virginia and Truckee, and Jan. Oct. '47, Jan. July, Aug. '48, Jan., June, Oct. '49 Trains or pay cash. R. J. Patzer, 504 McKinley St., Batavia, Ill.

TRADE: For HO trains or equip. Colt Challenger .22 ca. auto. like new. Winchester .44-40 lever action Sadel carbine. Model 1873 serial No. under 1500. Raymond Kleinowski 5304 W. Bloomingdale, Chicago, Ill.

FOR SALE: Lionel O ga. 2-6-2 loco. 110 and 8 w. trans. 027 ga. track, cars, etc. Send for list. R. Durk, 490 W. End Ave., New York 24, N. Y.

FOR SALE OR TRADE: O gauge Lionel Hudson 2 rail, brass Mikado. HO 40 frt. and pass. cars, 35 switches, track, etc. Send for list. Want automobile, convertible, age unimportant. Also accordian. Clifford Asbury, 35 West Court St., Warsaw, N. Y.

FOR SALE OR TRADE: 1950 model one owner MDC yardhog, w/Kemtron headlights, old-time, and pump. Needs new pickup assembly. $9.00. Also encyclopedia The Science of Railways, 14 vol. like new $45.00. Also asstd. plans of locos. 1885-1930. Allen Hill, 3 Occom Ridge, Hanover, N. H.

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SELL OR TRADE: MODEL CRAFTSMAN and other model rail and prototype mags. Also 616 and 620 photos. steam locos, N&W, SOU, B&O, VGN & others for Lionel O ga. List for stamp. Douglas Bristow, 733 E. Brooklin, Winston-Salem, N. C.

FOR SALE: HO locos. kits, parts, etc. New 50% off list. Send stamped envelope for list. William H. Wilson, 1517 Ord St., Laramie, Wyoming.

SELL OR TRADE: HOn3 scratch blt. 0-4-0T saddle-tanker, excel. cond. $25.00 or trade for Mantua Pacific kit and $5. cash. W. A. Livingston, 512 Davis Ave., Endicott, N. Y.

FOR SALE: Penn Line midget diesel switcher HO, gd. cond. $5.50. G. Soroko, North Farms Rd., Wallingford, Conn.

FOR SALE: Signal bridge 36" high, 3 tr. auto. blinking lights, excel. cond. $30.00 plus shipping charges. R. L. Hooke, 492 Highland Ave., Upper Montclair, N. J.

WANTED: Good AF pilot and cowcatcher casting with front trucks and crosshead guides to complete a No. 1680 AF loco. State price. Larry Butte, P.O. Box 86 Harborcreek, Pa.

SELL OR TRADE: Hornby-Dublo Pacific loc., Athearn RDC-1, 32 HO cars, 50' ACE roadbed, misc. HO equip., excel to fair, $50. Will sell separately or trade for O scale or TT what have you. Stamp for list. Alan Walmer, 2437 Parkway Blvd., Harrisburg, Pa.

FOR SALE: Hobbytown RD switcher dual drive new kit $23.-95. Globe Santa Fe with Lindsay power unit $9.00 untouched kits. Bowser 4-6-6-4 and Kemtron 12 wh. tender $54.95. J. Piper, 665 2 ave., New York 16, N. Y.

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FOR SALE: No. 259 Lionel loco. and tender, No. 2026 Lionel loco. and tender with smoke and whistle. Sell separately or both for $25. Also other equip. Write for list. John Hilbert, 1515 So. Elm St., Casper, Wyo.

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FOR SALE: Maerklin 0-6-0- CM 800 steam switcher, 2 frt. cars, large transformer, new, 2 coaches, Mitropa, Voiture Lita, 4 wh. baggage, gd. cond. $30. W. Phaehler, 124 Satterthwaite, Nutley 10, N. J.

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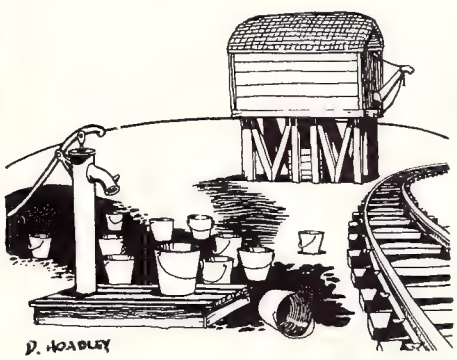
WE recently had an opportunity to build a small layout using Atlas HO gauge Snap-Track and switches. And boy what fun! It went together as easily as tinplate track, only when we were finished, we had what appeared to be a scale model layout, except that the double tracks were three inches apart instead of two. A layout which in "scale" track, whether Atlas or any other make, would have taken us several weeks of spare time to complete as to trackage, was whipped together in one evening, including wiring the switches. Presumably this could also be done with the other makes of sectional HO track on the market.

Putting this layout together in one evening, we were able to run on it at once, as soon as the first terminal section of track was laid and we clipped wires from a power pack to it. You don't have to worry about gaps or insulated rail joints unless you want to have separate control blocks or happen to have a reverse loop or wye. So you can just go ahead merrily snapping track together. Our test layout was double track, and we made it all one big happy block, although removing rail-joiners at the crossovers and putting on insulated ones might have taken ten or fifteen minutes more at the most.

What it did was to make us wonder whether we haven't been batting our brains out for nothing on nice "scale" layouts for these many years? Is scale HO trackage a dying art? Or rather will it be a dying art? With a couple larger radii curves in sectional track, it might well become a lost art.

Wonder how soon we will have scale switches with attached already mounted switch motors? What a boon that would be, since proper installation and control of a switch machine is a job that requires several hours to say the least. We don't like having the machine fixed at one side of the track so far out, too, that you cannot put switches together in a ladder. But maybe for scale operation mounting pads could be molded to the switch ties on both sides, with the switch machine so arranged that with a few taps of a hammer on some rivets you could affix it to either side and cut off the unwanted mounting pad. This would eliminate 90% of all switch control troubles, nearly all of which are due to the throw getting out of whack, either because of rails shifting or the switch machine pushing itself around.



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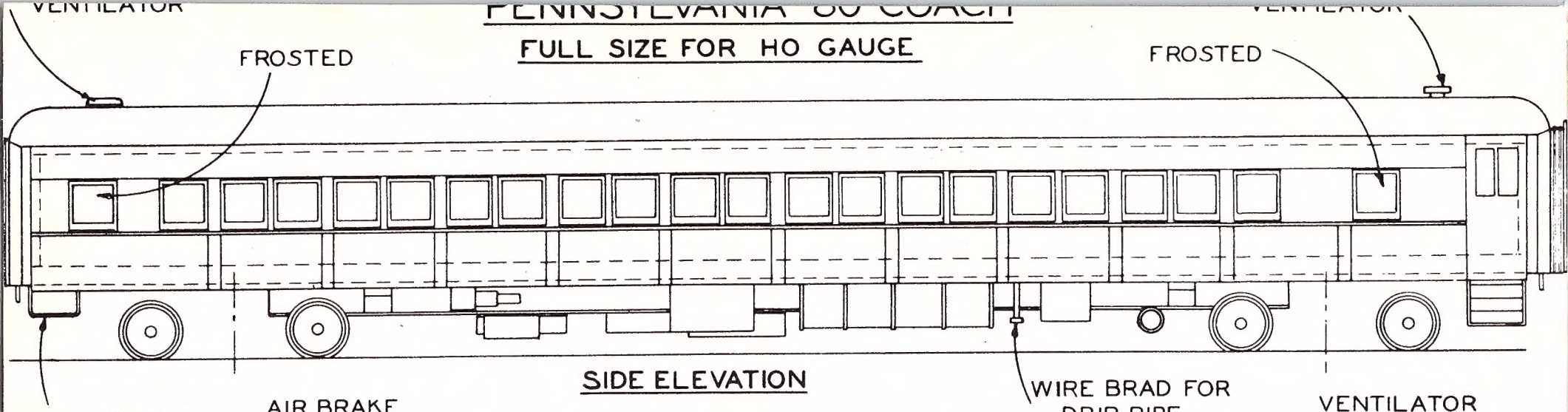

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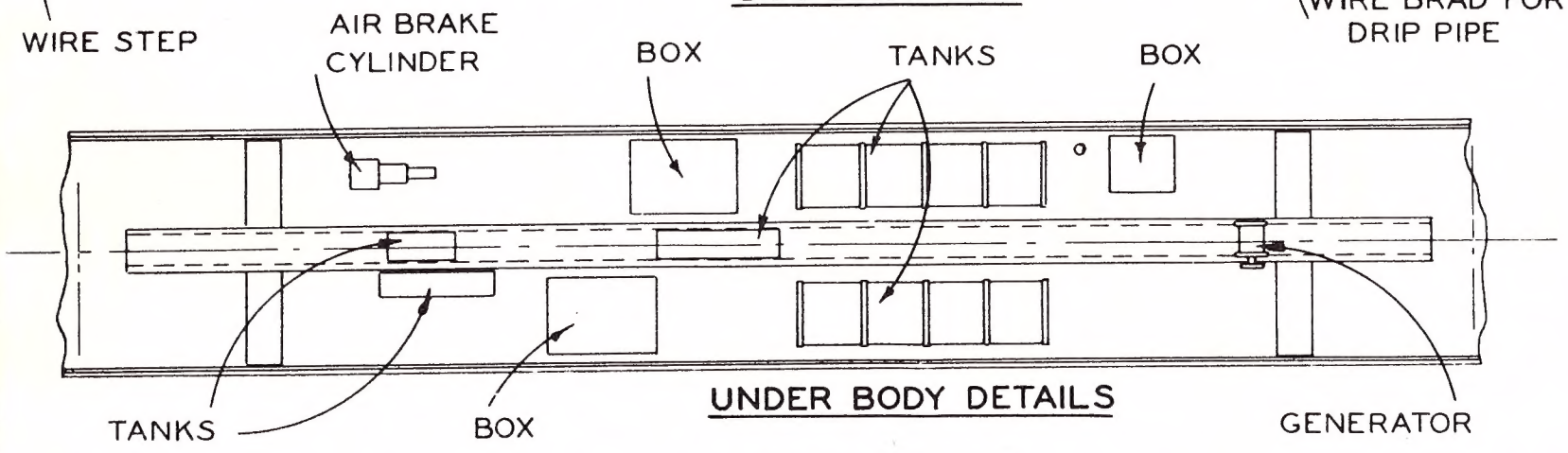

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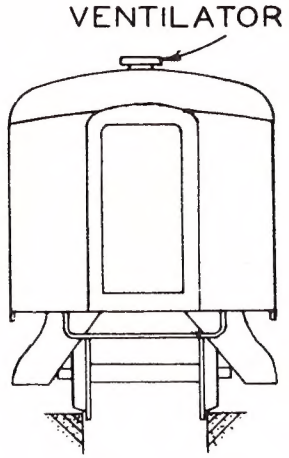

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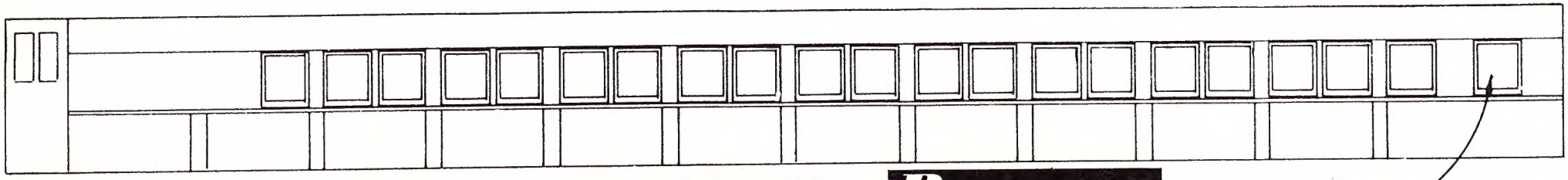

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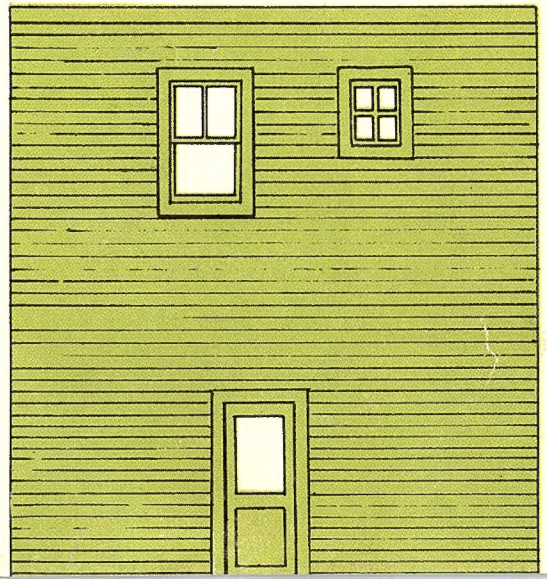

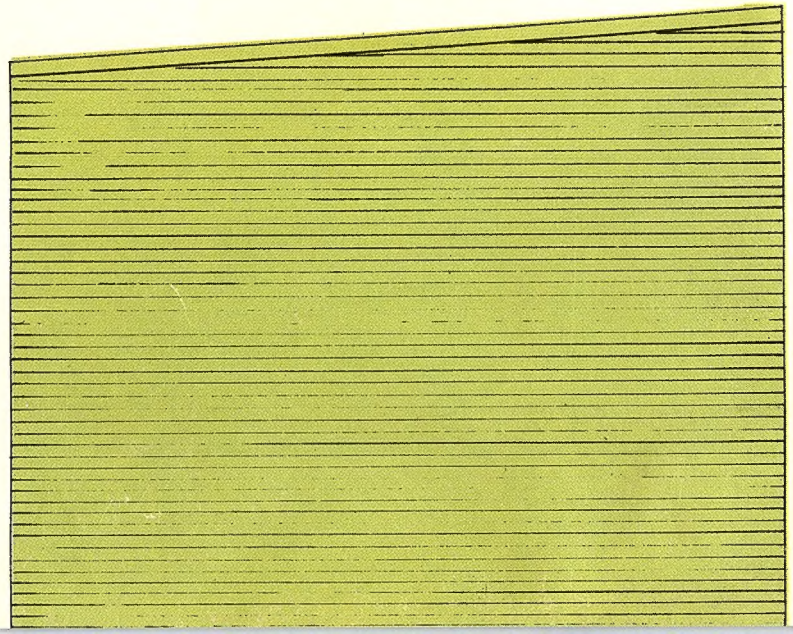

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